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NATIONAL FISHERMAN

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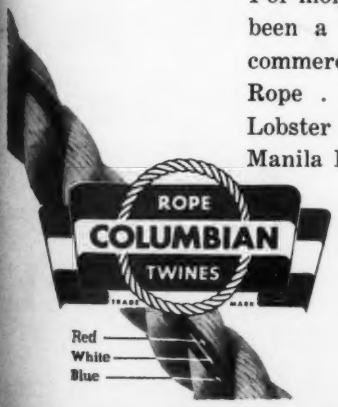

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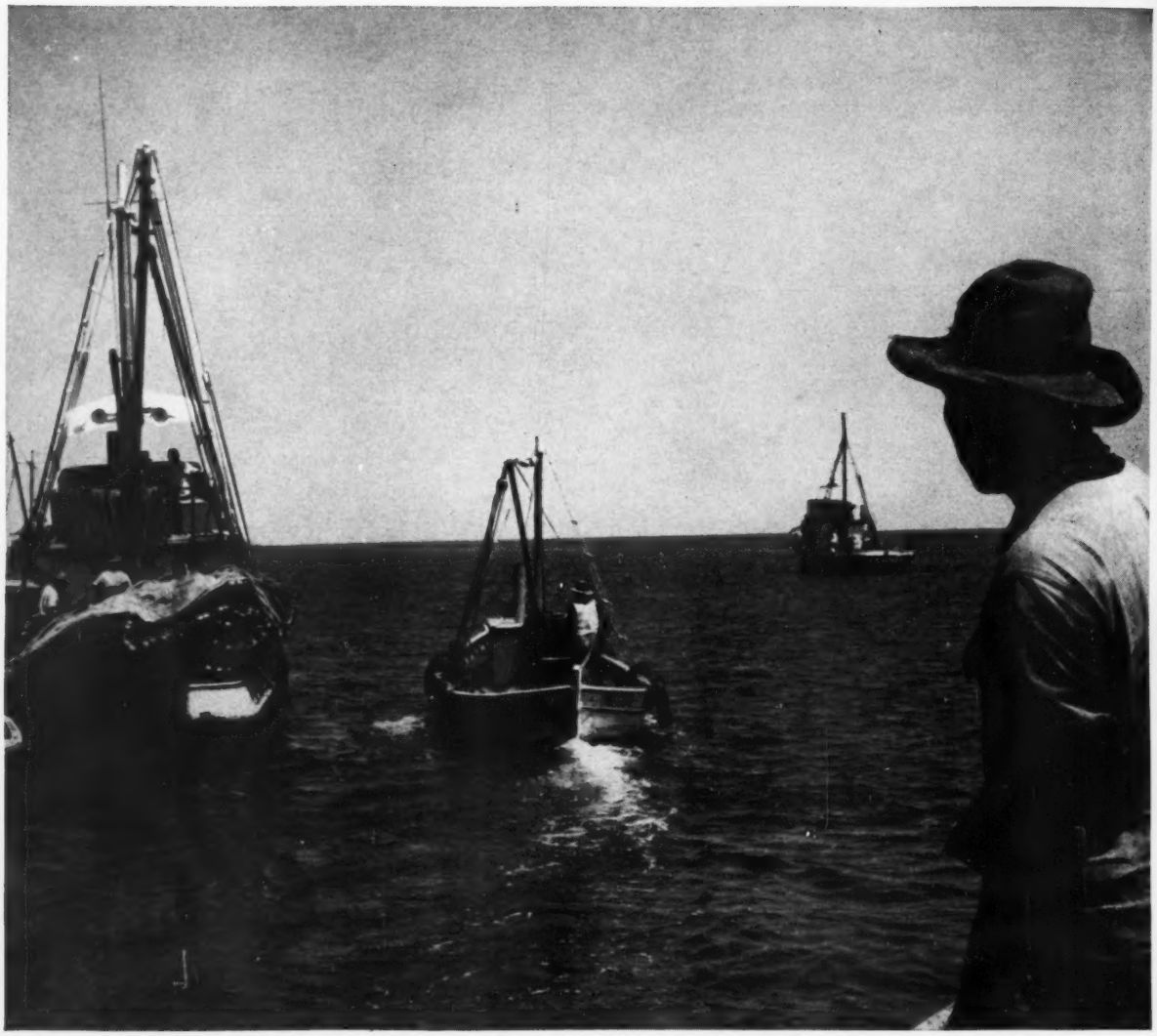

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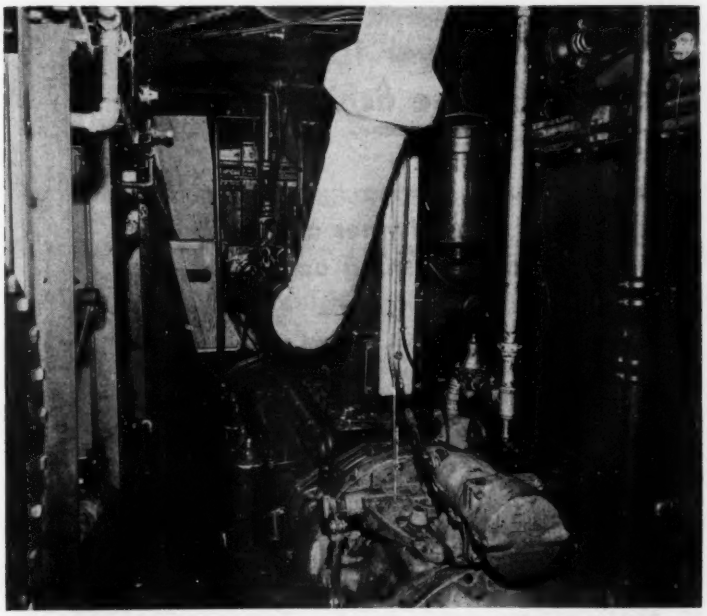

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The Lookout

Federal Assistance Act

Bills providing a five-year program of assistance to the fishing industry to gain a more favorable economic status, to be known as the Federal Fisheries Assistance Act of 1958, have been filed in Congress.

The purpose of the proposed act is to supplement the Fish and Wildlife Act of 1956 by authorizing direct assistance to any segment of the domestic fishing industry hampered by trade-agreement concessions from which escape clause relief has been or may be withheld because of considerations affecting the Nation's security or the National interest.

Direct assistance in the form of loans, grants-in-aid, and incentive payments would be made to improve methods of catching, handling, and preserving and processing fish. It would also be used for repair, alteration, improvement, replacement, and construction of fishing vessels and gear, fish preservation equipment, and processing plants. In addition it would provide assistance in reconditioning, equipping, and outfitting of new fishing vessels; to promote higher standards of safety; and to improve and standardize the quality of domestically produced fishery products.

Grants-in-aid authorized to any fishing vessel owner would not exceed 50 percent of the initial cost of purchase and installation of safety and life-saving devices. Grants would not exceed 90 percent of the cost of inspecting any fishing vessel to ascertain the repairs, replacements, alterations, or modifications necessary. They would not exceed 50 percent of the initial cost of making such changes.

No subsidy would be paid for fishing vessel construction until it is determined that the applicant will aid in the development of the fishery trade and that he possesses the ability, experience, and other qualifications necessary to enable him to operate and maintain the proposed vessel.

The construction subsidy may equal but not exceed the excess of the bid of the shipbuilder constructing the vessel over the fair and reasonable estimate of cost if it were built under similar plans and specifications in a foreign shipyard.

Incentive payments would be made to enable domestic producers of fish to meet foreign competition and would be paid to any fishing vessel owner for division in accordance with the custom of the fishery. Payments would not exceed 1 cent per pound to be added to the ex-vessel price to fishing vessel owners who shall observe practices prescribed for improving methods of handling fish and maintaining quality.

NATIONAL FISHERMAN

The Fishing Industry Magazine

Vol. 39 No. 4 May 1958

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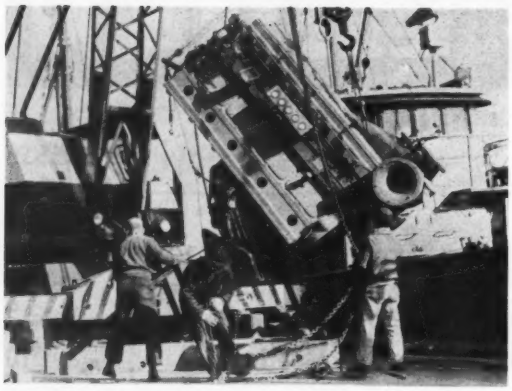
"AGATHA" and "OHIO" of the Boston Fleet



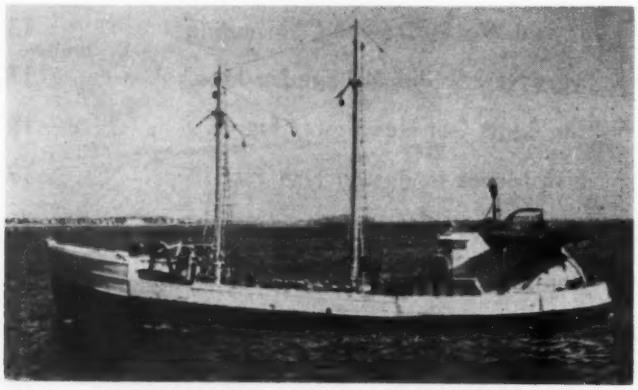
ENTERPRISE DMM-38 Diesel being lowered into the "OHIO".

Repowered by

ENTERPRISE DIESELS

"Plenty of towing power and good steaming speed" —that's what the owners of two well-known Boston fishing vessels report since they repowered with Enterprise Diesels.

The 96-foot steel trawler "Ohio", owned by Cefalo Brothers of North Atlantic Fish Co., has a new Model DMM-38 eight cylinder, 8 x 10 Enterprise, rated 600 hp. at 800 rpm., equipped with turbocharger, intercooler and 3:1 reverse-reduction gears.



BOSTON Wooden Dragger "AGATHA".

The 85-foot wooden dragger "Agatha", owned by Capt. Domenic Tringale, has a new Model DMM-36, six cylinder, 8 x 10 Enterprise, rated 400 hp. at 900 rpm., equipped with turbocharger, intercooler and 3:1 reverse-reduction gears.

Since repowering early this year, each of these boats has shown outstanding performance. They are consistently bringing in profitable trips of groundfish from Georges and Browns Banks. They have fished right along with boats much larger in size.

The owners of the "Ohio" and "Agatha" say their engines run exceptionally well, give top operating economy with both fuel and lube oil, and provide excellent maneuverability.

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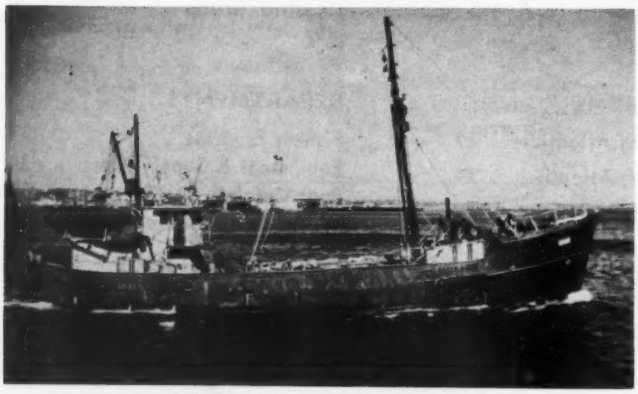
Full information on Enterprise models from 73 to 7703 hp. is available without obligation. Just write, or call in your nearest Enterprise marine Diesel engineer. You'll see why Enterprise is first choice of power experts.



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FISHERY PROGRESS

► Electronic Fish Tagging

An instrument has been invented with which a haddock will automatically attach a metal tag to its own body. Two methods for tagging haddock in this way are being explored. Common to both is a fish weir or trap with an escape opening. One plan is to have an electronic tagging device which the fish will trigger as it goes through the opening.

The other is to have a tagging device and an underwater television camera at the point of escape. A man on board ship watches the fish as it goes through the opening, presses a button and the tagging apparatus is set into operation.

Other aids to fishery research and management that the Bureau of Commercial Fisheries is developing include an electric sentry to keep carp and other undesirable fish out of river basin impoundments; a detector which will indicate a herring carrying a metal tag even though that herring may be covered by a netful of other herring; and a pocket size television camera for use in streams.

► Committee on Oceanography

The National Academy of Sciences–National Research Council has recently formed a Committee on Oceanography whose primary purpose is to promote the future development of oceanography in the United States. The Committee is sponsored by the Office of Naval Research, the Atomic Energy Commission, and the Fish & Wildlife Service.

Six panels have been formed to examine particular areas: 1) Panel on New Research Ships, Columbus Iselin, chairman; 2) Panel on New Devices for Exploring the Ocean, Allyn Vine, chairman; 3) Panel on Radioactive Waste Disposal at Sea, Roger Revelle, chairman; 4) Panel on International Cooperation in Marine Sciences, Athelstan Spilhaus, chairman; 5) Panel on Ocean Resources, Robert Snider, chairman; and 6) Panel on Basic Research in the Marine Sciences, Alfred Redfield, chairman.

The Committee is attempting with the assistance of the panels to 1) formulate recommendations concerning our long range national policy with respect to oceanography, 2) to assist in all possible ways in increasing both the quantity and quality of basic research in the marine sciences and 3) to advise specific government agencies concerning those problems which involve the marine sciences.

► Atomic Fishing Boats

A top United Nations naval designer predicted recently, that atomic energy will power fishing boats in the next few years.

Jan-Olaf Traung, chief naval architect of the Food and Agriculture Organization, based his prediction on scientific papers sent to him from many nations in his capacity as secretary of the Second World Fishing Boat Congress in Rome next April.

The first Congress concentrated on design and construction. Next year's Congress will have performance as its theme, and sessions will deal with fishing tactics, construction of vessels, sea behavior of boats, and productivity of vessels.

► Interior Has Grading Service

The Dept. of the Interior has assumed, under the authority of the Fish and Wildlife Act of 1956, the responsibility for furnishing inspection and grading services to the fishing industry. The Dept. of Agriculture will continue to furnish such services until July 1958 at which time the transfer of functions will be effected.

Additional commercial fisheries responsibilities of the Federal Government are being taken over by the Dept. of the Interior, from the Commerce and Agriculture Depts.

Two of these relate to the mortgage insurance and loans for construction of fishing vessels, jurisdiction of which has been in the Maritime Administration. This authority is apart from that already lodged in Interior to administer the fisheries loan program for financing, operating and maintaining fishing vessels.

All the functions of the Dept. of Agriculture pertaining to fish and shellfish now performed under the Agricultural Marketing Act of 1946 also are transferred to the Interior. Among these are the development and promulgation of voluntary grade standards for fishery products and for inspection and certification of such products.

► Preservation by Radiation

Studies on the use of nuclear radiation for the preservation of fish have been started by the U. S. Bureau of Commercial Fisheries in co-operation with the Quartermaster Food and Container Institute for the Armed Forces. The study is primarily a screening operation to select, for possible initial commercial utilization, those species of fish and shellfish that are most adaptable to the new method of preserving food.

All fishery products used in the investigation are irradiated at the Materials Testing Reactor Gamma Irradiation Facility at Idaho Falls, Idaho. The product to be irradiated must be packed in hermetically sealed cans. The cans are placed in a rack and lowered into a pool of water about 16 feet deep adjacent to spent fuel elements, the source of gamma rays. After being irradiated, each can is checked for radiation contamination before being returned to the research laboratories.

The potentialities of using nuclear radiation for the preservation of fish is being studied at the Seattle Technological Laboratory and, under contract with the Bureau of Commercial Fisheries at the Department of Food and Dairy Technology, Oregon State College and at the Food and Research Laboratories, Seattle, Wash.

► Salmon To Great Britain

The decision of the Board of Trade of the United Kingdom to spend an additional $2,800,000 for North American canned salmon opens up additional market possibilities for this country's salmon industry, Assistant Secretary Ross Leffler of the Dept. of Interior said recently.

Salmon will be supplied by both Canadian and American firms on a competitive basis. The amount available for export will depend on the salmon harvest.

Leffler stated that the Dept. of Interior has been interested in getting countries like the United Kingdom to liberalize imports of salmon from the United States. America had a substantial foreign market for salmon before World War II, he added, and it is gratifying to see the restrictions of traditional markets being relaxed.

► Clams on Rafts

The Bureau of Commercial Fisheries states that it is conducting an experiment at Woods Hole, Mass., with raft culture methods which have proven such a success in Japan.

The Bureau report says, "If this method can be successfully adopted to American waters and American labor conditions, it should give a real boost to (the) industry."

Another team is conducting similiar experiments at various places in Maine and feels that the results will find application in Plum Island Sound of Massachusetts.

► Fish Sticks Up to 17%

Preliminary data indicates that the production of fish sticks during the first three months of 1958 amounted to 16.9 million pounds, according to the Bureau of Commercial Fisheries. This is an increase of 2.5 million pounds or 17 percent compared with the first quarter of 1957.

The Atlantic Coast states led all areas with 14.1 million pounds or 83 percent of the total. Cooked fish sticks accounted for 92 percent of the first quarter total. Production was greatest during February with 5.5 million pounds. Over 5.0 million pounds were packed during January and March.

THE MOTOR YOU SEE BELOW is the world's first outboard V-engine—the Johnson Sea-Horse V-50. Two facts stand out about it. It's a glutton for punishment. And it's a ring-tailed wonder under load.

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FREE 1958 Sea-Horse catalog Write: Johnson Motors, 456 Pershing Road, Waukegan, Illinois. (Division of Outboard Marine Corporation. In Canada: manufactured by Johnson Motors, Peterborough, Ontario.)

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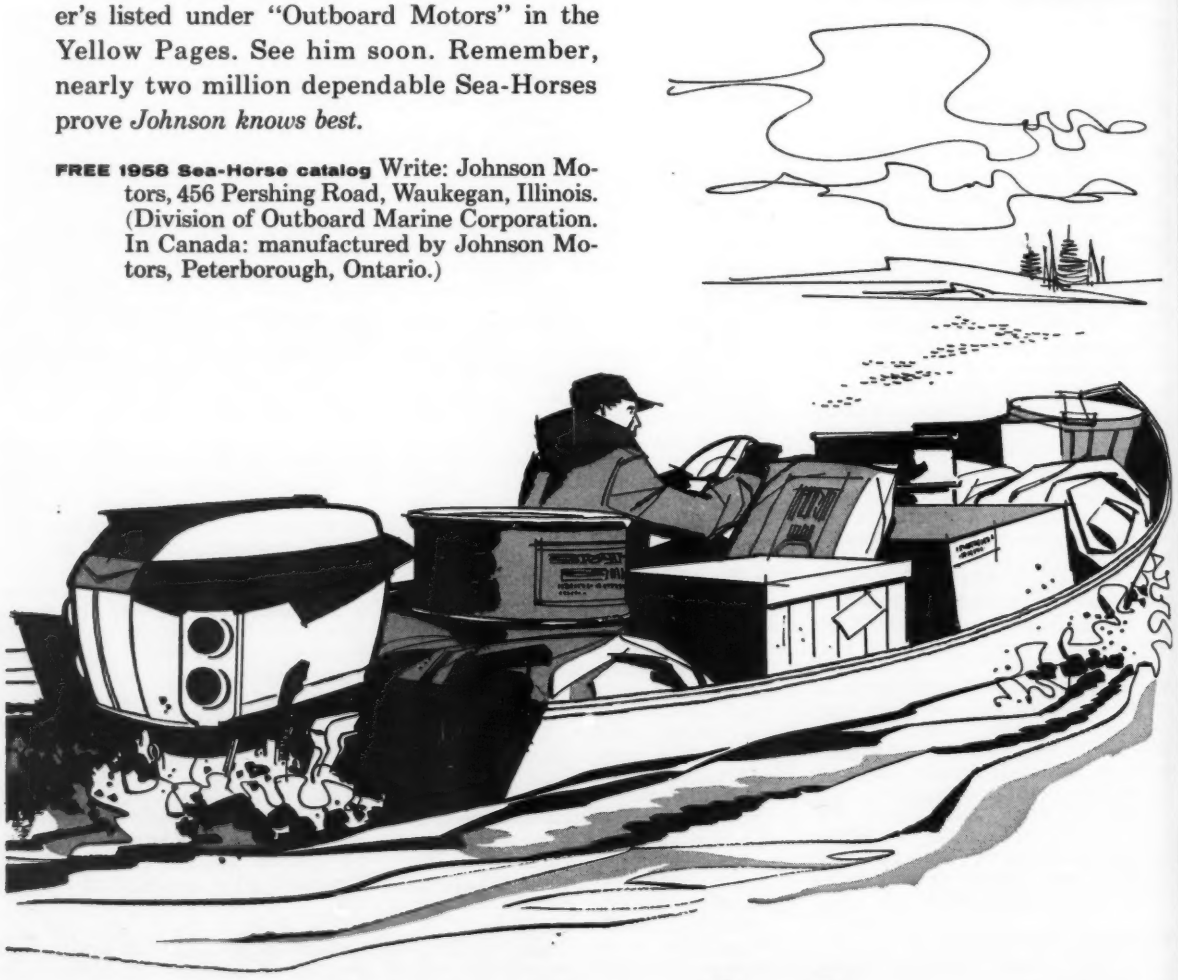

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Fishermen Keep Three-Mile Limit at Geneva

United Nations Conference disagrees on extension of territorial waters, leaving coastal countries with their traditional limits

GOOD news came to United States fishermen from Geneva recently, when the United Nations Conference on the Law of the Sea failed to agree on an internationally acceptable limit for territorial waters. The matter was discussed for two months, but the traditional three mile limit is still in existence.

The Conference opened with 89 nations meeting on February 24 to begin consideration of problems connected with the limits of territorial seas regime of the high seas, contiguous zones, international fisheries, and free access to the seas of land locked countries.

In the thousands of years that man has been working on and in the sea there has never been an internationally recognized set of laws to govern his actions on those seas. Nor has there been a satisfactory definition of high seas. The conflicts for national advantage have always been too intense.

The Conference on the Law of the Sea has been an attempt to write an international maritime code. The most pressing and perhaps the deciding issue at the meeting was the question of how far into the sea do a nation's sovereign rights extend.

The first description of such a distance was given in 1703 by a Dutchman, Cornelius van Bykershock, who suggested that a nation's sovereignty extend as far into the sea as a land based weapon could fire. Two Italians in the 18th century fixed the distance at three nautical miles. However this distance was never internationally accepted due to differences over questions of fishing rights.

The Soviet Union has traditionally asserted sovereignty over a twelve mile limit and Mexico has a nine-mile limit. Chile, Peru, Ecuador, and Costa Rica claim exclusive rights for 200 miles. Others such as Spain, Italy, Greece and Egypt have claimed six miles as the limit. Great Britain, France, Germany, Japan and the United States, in the past, have favored three miles.

12-Mile Limit Favored

"The present and traditional three-mile limit, universally accepted around the world" was thrown overboard by a majority of the delegates in attendance at the conference, in favor of a 12-mile restricted zone offshore, inside of which no fishing by other nations would be allowed.

Some nations proposed that the exclusive fishing zone be extended to 200 miles. Others advocated a line drawn parallel to the continental shelf and the United States supported the three mile limit.

Canada proposed a compromise. Canadian delegates suggested that the three mile limit be retained for purposes of sovereignty, but an additional nine mile contiguous zone would be recognized over which the coastal country could exercise exclusive fishing rights. The United States decided to support the Canadian compromise 'with little alternative'.

The majority of countries that pressed for an extension of the territorial sea were doing so for fishing purposes. A 12-mile exclusive fishing zone was the minimum that they would consider.

However, not fully satisfied with the compromise, the United States delegation proposed a six-mile territorial jurisdiction for defence purposes with an additional six-miles, over which coastal nations could have jurisdiction for fishery purposes with the exception that other nationals who have fished the area for ten years or more would be permitted to continue.

The 12-mile proposals met with disfavor in the American fishing industry. A 12-mile fisheries limit virtually may eliminate a large portion of the best fishing areas now open to our fishermen, said Milo Moore, Washington state fisheries director. Moore said the problems, which led to Canada's proposal of the limit, appear to have arisen from East Coast problems.

Off some shores, Canadians are restricted by their government to a 12-mile limit to protect inshore lobster fisheries. United States fishermen can operate up to three miles of those shores.

Listed as areas of loss to United States fishermen had the proposal been approved included historic salmon halibut and bottom fish areas off British Columbia, and coastal herring stocks largely utilized by Canadians and protected by law.

There would also be a loss of benefits from funds spent in hatchery and conservation efforts which would accrue to Canadian fishermen as migrating salmon head for Puget Sound, Grays and Willipa Harbors, the Columbia River and other streams to the south. Continuing, Moore said that there would be a forced concentration of United States fishermen in areas already fished to the maximum permitting reproduction of stocks.

In committee the Conference rejected all proposals for extending territorial waters beyond the three-mile limit. The Canadian proposal to permit coastal countries to keep foreign fishermen out of a zone extending 12 miles offshore was approved 37 to 35. But, with the absence of a definition of territorial waters this proposal has little practical meaning. The committee rejected the American proposal 38 to 36.

The 12-mile limit which had been proposed, and in the last days seemed inevitable, was defeated in plenary session because it lacked the necessary two-thirds vote of the delegates in attendance. Although no plan attained the necessary majority for adoption, the United States six mile territorial limit plus six mile fishing rights protecting countries whose nationals have fished that area for ten years, came the closest.

Contiguous Zone Defined

The Conference defined unamimously "contiguous zone". It declared (1) in a zone of the high seas contiguous to its territorial sea the coastal state may exercise the control necessary to (a) prevent infringement of its customs, fiscal, immigration or sanitary regulations within its territory or territorial sea. (b) Punish infringements of the above regulations committed within its territory or territorial sea.

(2) The contiguous zone may not extend more than 12 miles from the base line from which the breadth of the territorial sea is measured.

(3) Where the coasts of two states are opposite or adjacent to each other such as Canada and the U. S., neither of the two states is entitled, failing agreement between them to the contrary, to extend it contigous zone beyond the median line, every point of which is equidistant from the nearest points on the base line from which the territorial seas is measured."

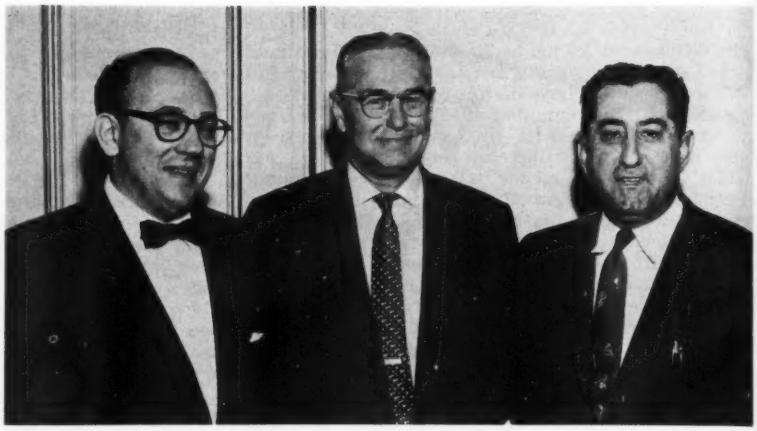
The Conference decided in plenary session to amend three articles of the draft code of the sea law, giving landlocked countries free access to the sea. The amendments extend noncoastal states the right of innocent passage through territorial seas, freedom of the high seas in navigation, fishing, laying of submarine cables and pipe lines, and the right to fly over the high seas and sail ships flying their flags on it.

It was agreed that nations having no sea coast, should by common agreement with a coastal state, have free transit through its territory on a reciprocal basis and enjoy equal treatment in its ports.

Vocational Training Outlined at NFI Meeting

Drape Elected President of National Fisheries Institute at San Francisco Conference

REPRESENTATIVES of the nation's oldest industry, the fishing business, met in San Francisco, California, April 20 through April 23, for the thirteenth annual convention of the National Fisheries Institute, held under the supervision of Charles E. Jackson, General Manager, and Murray Wheeler, public relations. Eight hundred members of the commercial fisheries and allied industries attended the convention, held at the Sheraton-Palace Hotel. Fishing fleet owners, packers, brokers, distributors, and canners discussed the problems of the United States fishing industry, which last year had a 4.8 billion pounds catch worth more than one billion dollars at the retail level.



New officers of the National Fisheries Institute, elected at the Institute's annual convention at San Francisco in April. Left to right: secretary, Arthur Frohman, L. H. Frohman & Sons, Chicago; president, L. Vernon Drape, Ell Vee Dee, Inc., Fall River and New Bedford, Mass.; treasurer, Virgil Versaggi, Versaggi Shrimp Co., Brownsville, Texas.

John Santos Carinhas, Jr., Brownsville, Texas, told of the fisheries vocational education program now in its first year in Brownsville, which is attracting Texans in their late teens and twenties. Other port cities are looking with interest at this way of filling the demand for trained commercial fishermen. The course teaches navigation, radio and depth recorders, boat mechanics, sanitation, and all types of fishing gear.

"Progress in technology", under the direction of John Kaylor, Birds Eye Division of General Foods, Gloucester, Mass., was covered by two skits, representing the industries progress in new products and the use of the latest scientific methods.

High on the list of subjects reviewed during the convention were Pacific Crabs, fresh-water fish, North Atlantic fillets and industrial by-products, such as fish oils and feed for livestock and poultry.

A talk by Rupert Murray, Safeway Stores, San Francisco, on increasing profits through promotion, followed a presentation of past, present and future plans for industry-wide promotion entitled "10 Years of Fishery Promotion". Chairmen were J. Roy Duggan and Frederick M. Bundy, president, Gorton's of Gloucester, Mass.

A presentation of the entire promotion of the 1958 Fish and Seafood Week was given at the convention. The committee to develop dealer and restaurant posters and make them available was named earlier by Bundy, and has as chairman J. Roy Duggan, vice president of SeaPak Corp. and chairman of the National Fisheries Institute's joint public relations committee; Robert J. Gruber, president Fishery Products Inc.; Paul Jacobs, vice president Groton's of Gloucester; Richard Kulze, South African Lobster Tail Association; and Gaylord Lewis, president Fulham Brothers.

Left to right: Murray Wheeler, director of public relations, National Fisheries Institute, Washington; F. M. Bundy, Gorton's of Gloucester, Gloucester, Mass.; and J. Roy Duggan, SeaPak Corp., St. Simon's Island, Ga.; spoke during a filmed presentation of 10 years of NFI promotion and plans for 1958 Fish and Seafood Week at the NFI 13th annual convention.

In explaining the fall promotion, Bundy said that it is in early autumn that fish and shellfish are most plentiful. Catches are at their heaviest during the summer and early fall, millions of pounds have been quick-frozen or canned for the dinner tables, a variety of fishery products is available, and the prices are down. It is then, he said, that food buyers for both home and restaurant should take advantage of the abundance of this high grade protein food.

Although the fishery products are plentiful throughout the late summer and early fall, the Committee has named October 6 to 12 as the National Fish and Seafood Parade. Every large city will sponsor its own Parade, to tie in with the national promotion. Chain stores will feature fishery specials at budget prices. Restaurants will serve new fish and shellfish dishes.

A grocery chain's promotion executive told the NFI that the selling effort by the fisheries doesn't match that of meat and poultry producers. "The fishing industry is up against stiff competition when it comes to sales at the store level," said Rupert Murray. He stated that meat, poultry, and dairy industries all spend much more than the fish industry in promoting their products.

Fish consumption in the United States has only kept pace with the population growth, but consumption of the competing foods has made conspicuous gains above that, he continued. The per-capita beef consumption has risen from 70 to 85 pounds in ten years and poultry increased from 22 to 38 pounds in the same period.

Becoming a Leading Industry

The fishing industry is on its way to becoming one of the nations leading industries, L. Vernon Drape of Fall River, Mass., said on being elected successor to Aldo Casaretto as president of the National Fisheries Institute.

"We have seen some dark days in the fisheries industry. Admittedly, we brought them on ourselves by not keeping our equipment modernized and not selling our products aggressively to the American consumer. However, that day is rapidly ending and I predict that within five years, fish and shellfish products will be more and more on the housewife's menu list.

"In spite of high food prices, fish products are economical food for the family. Our products have consistently maintained moderate price levels in comparison with other protein foods." Drape committed himself to higher quality standards for fishery products and bigger cooperative action in publicizing and promoting the merits of fish and shellfish. Drape is head of Ell Vee Dee, Inc., of Fall River and New Bedford, Mass.

Arthur Frohman, L. H. Frohman & Sons, Chicago, was elected secretary and Virgil Versaggi, Versaggi Shrimp Co., Brownsville, Texas, treasurer. New vice presidents are Harry A. Trimm, Jr., General Foods, White Plains, N. Y.; Carl Pass, Meletio Seafood Co., St. Louis; Sam J. DeLuca, State Fish Co., San Pedro, Cal.; Harvey H. Bundy, Gorton's of Gloucester, Gloucester, Mass.; Palmer Olsen, New England Fish Co., Seattle, Wash.; and Harry I. McGinnis, Empire Menhaden Co., New Orleans, La.

"Youth and Fisheries"

John Santos Carinhas Jr., in his address, outlined the revolutionary educational program now in its first year in Brownsville, Texas. Entitled "Fundamentals of the Fishing and Shrimping Industry" the program began in December of last year and extends through this May. It is sponsored jointly by the Texas Shrimp Association and the Texas Education Agency. The course of instruction consumes 218 hours and is available free of charge to students.

There is a great demand for trained commercial fishermen on the Gulf Coast and in other sections of the country. There are men who are good fishermen, but there are not enough of them. On the other hand, there are too many who should not be working on boats, regardless of how high a position they hold at present, or how long they have been fishing, according to Carinhas.

"One way to differentiate between a good fisherman and a bad one is by the production from a man and his crew," Carinhas said. "However, too often this is the only factor taken into consideration. The boat owner must also consider the manner in which the fisherman takes care of his property, and the lives of the men working with him. A good fisherman can train those working under him, if he will take the time. However, there is a certain amount of professional jealousy among the fishermen, and they become reluctant to do so. How then can we get good trained fishermen . . . with a sense of responsibility to themselves, the boat owner and the men working with them?"

In December of 1957, after several months preparation, a vocational education program was begun in Brownsville, Texas, Carinhas continued. The classes met three nights a week from 7 to 10 pm. When asked how a man can be trained to be a fisherman in a classroom, Carinhas answers, he cannot, but he can be taught the fundamentals of fishing so that he can advance as quickly as he is capable, after he goes aboard a fishing vessel.

It was quite difficult to decide what should be covered in the course, and to draw up a suitable outline to be followed. There was no previous guide available, so they started with the most pressing problems—the things that were costing money and time.

First the students had to be orientated. It was important for them to know what type of lives they would be leading if they chose fishing as a career. It was necessary to explain the relationship of the owners, captains, and crews so that there would be complete understanding on methods of paying for the catch and what was expected of the fisherman, as well as the boat owner. Next the men were shown a scale model of a shrimp boat. They were given a complete tour of the boat from bow to stern, including all machinery.

A local insurance surveyor told them how the boat was constructed and how to take care of the hull. Emphasis was placed on fire prevention. It is necessary for the men to know how to handle an emergency at sea. Accidents take place, but with proper first aid training lives can be saved.

The Coast Guard explained their purpose and procedure. Last, in the introduction, was the explanation of the fisheries, international situation, which is of vital concern to the shrimp industry today. With this background information, the men were ready to begin the specialized fields.

John Santos Carinhas, Jr., Brownsville, Texas, spoke on the fisheries vocational education program in its first year in Brownsville.

Navigation is essential to any fisherman, be he captain or deckhand, Carinhas explained. No one would let a man drive a car if he knew nothing about driving. Neither should he take a boat unless he knows how to go to sea and return. This comes from experience, but with a knowledge of aids to navigation, charts, behavior and handling of boats, local coastal guides, currents and the principle of dead-reckoning, it will not take as long to gain the experience.

Electronic equipment, principally depth recorders and marine radio telephones, are used to aid the men in their work and as a means of obtaining assistance when needed. If these aids are properly used, they can be invaluable, so it was necessary to teach the men the proper use and maintenance of such equipment.

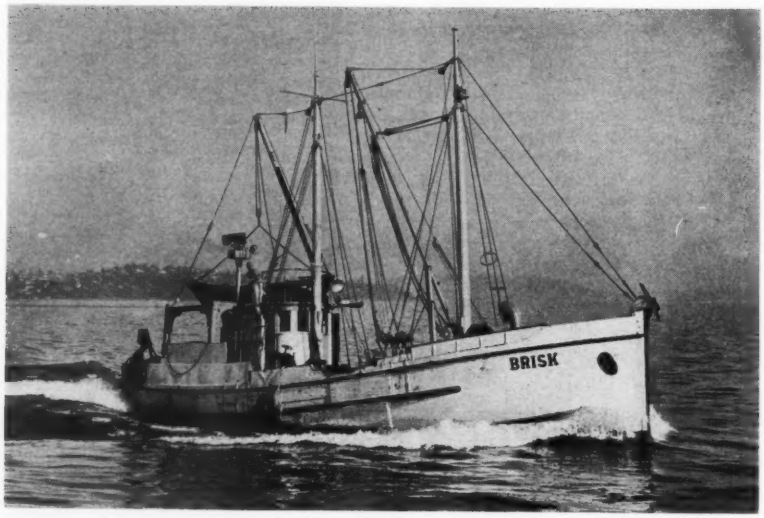
The machinery on a ship must be maintained at all times. The function of each piece of machinery and how to maintain it was explained, pointing out that if it is not maintained, it will not function, causing a loss of work time, a loss of valuable property, and possibly a loss of lives. Safety in regard to machinery operation was stressed.

Next, as much information as possible on shrimp was pointed out. The various commercial species and their habitats were identified, plus views on conservation. Instructions were given on the proper methods to be used

(*Continued on page 32*)

At the Industrial Products Division general session were, left to right, W. E. Barraclough, Fisheries Research Board of Canada, speaker; Jack T. Styron, Louisiana Menhaden Co., New Orleans, La., retiring chairman; and Dr. Laurence W. Kinsell, director Institute for Metabolic Research, Alameda County Hospital, Oakland, Cal., speaker.

Increased Use of Electronic Aids, Mechanization Lends Greater Efficiency To Pacific Trawling*



THE "BRISK", 65' DRAGGER owned by Nils Farstad, Everett, Wash. Power is supplied by an 190 hp. Allis-Chalmers engine with 4:1 Capitol reduction gear. She has Plymouth rope, Northill anchor, Bendix depth recorder and Bendix radar. Other equipment includes White Constellation compass, Apelco direction finder, and Wood Freeman automatic pilot.

OTTER trawl vessels operating from ports along the Pacific Coast fish the offshore waters from Santa Barbara northward to Hecate Strait, B. C., a distance of nearly 1,500 miles. Boats engaged in the fishery are mostly converted seiners and halibut schooners from 45 to 100 feet in length.

The fish capacity of these trawlers is about 33 short tons. Three or four man crews are used although five and six man crews were common during t' war years. Almost all trawlers fishing West Coast waters use davits which are placed near the stern, one on each side of the vessel. Normally the net is set directly over the stern and subsequently lifted aboard over the starboard side.

The use of the seine or schooner type trawler has allowed operators to convert and rig quickly for salmon, halibut or albacore when it appears that these fisheries may be more lucrative. Because of its seasonal nature, trawling has been a part time off season operation for many skippers.

Important changes in fishing gear and methods influencing the efficiency of trawling have evolved since the end of World War II. The most spectacular trend has been the assimilation of various electronic devices, developed and modernized during the war. An important part of this trend has been the increasing dependence trawl fishermen place on this equipment. Depth finders, Loran, radar, and fish finders are all carried aboard the better equipped vessels.

Electronic Aids

The use of echo-sounders aboard West Coast trawlers preceded World War II. By 1947 a reported 25 percent of the California trawl fleet was equipped with them. Improvements and refinements in echo-sounding equipment occurred during the war and gave impetus to their popularity and trawl fishermen quickly adopted either the flashing or recording type echo-sounder.

By 1948, reliance on the device was so complete that failure of the echo-sounder meant a return to port for most trawlers. Its adoption by the trawl fisheries was an expected occurance and practically all offshore trawlers were using them by the end of 1948.

Interest in war surplus Loran sets increased in 1949, especially in the Pacific Northwest where adverse weather conditions made accurate offshore navigation difficult. The advantages of precise fixes for trawl fishing were quickly recognized and by 1954 Loran was being used by most trawlers between Eureka, Cal. and the Canadian border.

The adoption of the Loran resulted in a new era and methodology for the West Coast Fishermen. Precise navigation increased the effectiveness of trawling on grounds both inshore and offshore, and it was especially important in making deep-water fishing a profitable operation. The rugged submarine topography of offshore grounds had previously made their exploitation difficult and at times unprofitable. Loran coupled with echo-sounders, gave trawlers the accuracy needed to define and maintain their position when fish were located.

Since 1954, Loran has so completely dominated the navigation and fishing of trawlers that reference to trawl grounds is seldom related to prominant headlands or banks but more often as a Loran microsecond reading. A fisherman may refer to good sole fishing encountered in the 3200 block or above 2915, etc. Loran readings have in many instances replaced other methods of recording positions in trawlers' log books, and the practice of towing in time intervals has been discarded by some skippers in favor of towing actual distances as measured by microsecond intervals.

Incorporation of radar progressed somewhat slower and the first sets were not installed until 1954. The trawl fishermen were well aware of the safety advantages of this device and the possibilities of around the clock fishing. Apparently the basic cost has been the major reason radar has not been installed aboard a larger number of vessels. In the Pacific Northwest area about 25 percent of offshore trawlers are now equipped with radar, using wave-lengths of 3 or 10 cm.

Fishfinders using the cathode ray tube presentation, which allow the operator to select and expand the echo-trace for a particular depth level have been purchased by a small portion of the fleet. Interpreting echo traces requires considerable experience, and increased yields which result from the ability of these devices to detect ground fish is dependent on the operator's proficiency in calculating the trace.

It is difficult to assess the effects that various electronic devices have had on trawl fisheries along the west coast

(Continued on page 31)

* This article based on material presented by Dayton L. Alverson, Fisheries biologist, Dept. of Fisheries, Wash., at NFO International Fishing Gear Congress.

"Kaybe" Built For Mid-Water Trawling, Shrimping, Seining

IT is possible that the *Kaybe* is the most unusual Hatteras trawler yet made by the Morehead Shipbuilding Corp. Delivered to the Kaybe Fishing Corp., of St. Petersburg, Florida, the *Kaybe* will do seining, shrimping and mid-water trawling off both east and west coasts of the state, out of Tampa.

The 58' trawler, with flying bridge, is one of the best looking and most versatile boats built by the North Carolina firm. Besides the flying bridge and dual controls, the *Kaybe* has living quarters for a crew of seven. She has an enlarged fish hold which is approximately 50 percent greater in capacity than the usual Hatteras trawler. This is made possible by locating the engine forward, directly under the wheel house.

The rigging is also unusual. The main boom is a lifting type controlled by a Stroudsburg 515½ winch. There are two smaller, movable booms on either side, which are used both for mid-water trawling and twin shrimping booms. On deck, aft of the winch, is a power gurdy for pulling the seine. This is the owner's special design and it is boxed when not in use.

Kaybe is a powerful boat for her size. She has a 6-110 General Motors Diesel rated at 210 hp. at 1800 rpm. with reduction gear of 3.75:1 ratio, turning a Federal 44"x34" four-bladed propeller on a Tobin Bronze shaft. The auxiliary generator unit is a Lister.

Other equipment includes an Apelco 76CM radiotelephone, Raytheon DE116 depth recorder, two Jabsco pumps, one Mile-Ray searchlight, Danforth anchor and Wall manila rope.

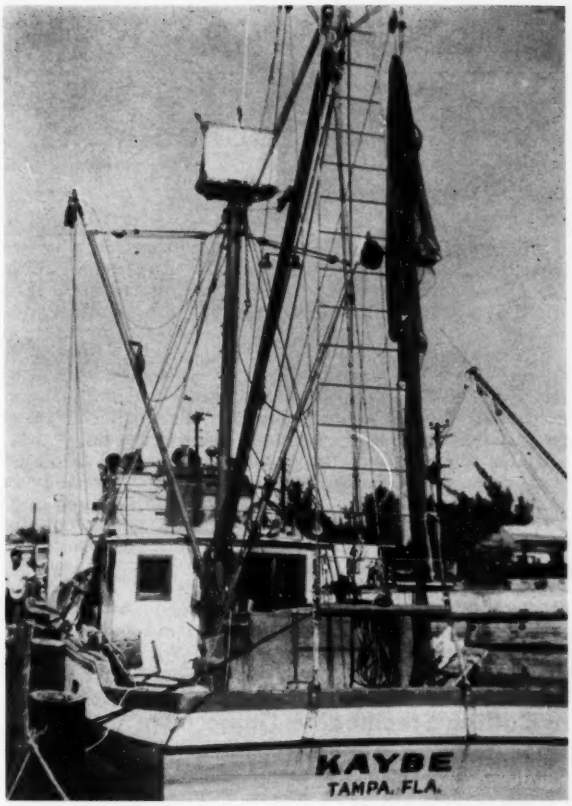
A dual purpose motor vessel, the *Kaybe* has as its main objective in the design of the boat, combining the best features of a modern double rig shrimp trawler with the qualities of a Pacific Coast type sardine vessel.

The shrimping rigging is standard on the new double-rig otter trawls, with two 24 foot outriggers handling 40-foot trawls. The three drum winch is located directly behind the deck house. The gear will be stored ashore at the end of the season. The outriggers are detachable and after being removed will allow the 30 foot main boom to swing to one side for handling the Lampara type seine.

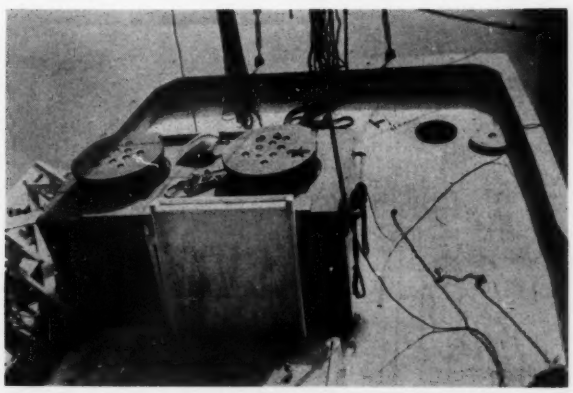
During the sardine season, locating the schools of fish will be aided by an airplane in contact with the boat by radio telephone. There will also be a look out in a crows nest 30 feet above the main deck.

When a school of fish is located a skiff is placed overboard with one wing of the net being made secure to the skiff. The vessel then makes a large circle around the school. When the circle is completed, the wing secured to the skiff is handed to the vessel crew. The stern of the vessel is held to the windward to keep the net from the propellers. Approximately five feet from the stern there are two 30 inch horizontal gurdys and over the stern there are two vertical rollers. The wings of the net are brought on deck with the aid of the gurdys which have a speed of 14 rpm. After the pocket of the net is brought up to the stern the fish are then brailled on deck where there are four deck plates on each side of the vessel. After the deck plates have been removed the fish can be shoveled directly into the 32 ton hold.

The two fishing seasons are expected to be evenly divided, with six months activity in each fishery. Shrimping is tentatively to be confined to the Totugas area. The sardine fishery is located in the upper Gulf with the landing port being Passe De Grille, Fla.



Rigging on the "Kaybe" showing the crows nest used to locate schools of sardines, and the raised removable 24-foot outriggers.



Left: 58-foot trawler "Kaybe" powered by a General Motors 6-110 Diesel. A Stroudsburg 515½ winch controls the main boom. Above: Two 30 inch, horizontal gurdies with a speed of 14 rpm. are used to bring the wings of the net on deck.

PACIFIC COAST

Oregon Would Rear Salmon In River Ponds

The State Game Commission has authorized its fisheries department to launch investigations designed to initiate a program for the rearing of steelhead and salmon in a series of ponds located on river systems holding runs of anadromous fish.

This would represent a radical change from the commission's present system of rearing these fish in hatcheries. Under the new plan, the steelhead and salmon would be reared in the impoundments and released directly into the river system to migrate to the sea.

Under the program, the Rogue River would be given first priority with the Umpqua and south fork Coos rivers next in line.

It is estimated that steelhead rearing ponds on any given stream would approach an individual production of 200,00 fish yearly, 10 to the pound in 18 months of rearing.

The program would be carried out with federal aid funds, with the ponds to be built at an estimated average cost of $500 per surface acre. Number of ponds would vary on the different river systems.

Oregon Fish Commission Opposed to Calling Steelhead a Game Fish

By unanimous vote, the Oregon fish commission last month went on record as being officially opposed to declaring steelhead a game species in Oregon waters. The commission, composed of Harold T. Johnson, Astoria, Omar Palmer, Portland and Charles W. Mahaffy, Coos Bay, said it viewed with particular disfavor and alarm a movement currently underway to place the steelhead issue on the November ballot.

Johnson declared that the enactment of the proposal being advanced would result in either a tremendous wanton wastage of highly palatable fish or complete abolition of commercial fishing in the Columbia river.

The manner in which gill net fishing has been conducted in the Columbia river for more than 100 years makes it impossible to fish for salmon without catching varying numbers of steelhead.

Under provisions of the proposed initiative, a commercial fisherman would be heavily fined for catching even a single steelhead either intentionally or by accident.

Oregon law prohibits the wanton wastage of both food and game fishes which precludes any disposal of steelhead caught incidentally during a legitimate salmon fishing operation in the Columbia except through established commercial channels.

The Oregon Fish Commission is obliged to manage the food fishery resources of the state on the basis of conservation, substantiated by investigations.

Scientific findings of highly qualified biologists indicate that Columbia river steelhead runs are in good condition, and evidence indicates that with continued proper management, these runs can maintain a sizable harvest by both sport and commercial fishermen.

The "Leone" is powered by a 110 hp. Nordberg engine. She is equipped with Kaar radio, Wood Freeman automatic pilot, SurEcho depth sounder, and Kolstrand gurdies. The 38' boat is owned by Lawrence Walker of Eureka, Cal.

Shrimp Exploration on Oregon Coast

The exploratory fishing vessel *John N. Cobb* was scheduled to begin the second of the 1958 series of shrimp explorations off the coast of Washington and Oregon on April 28.

The main objectives of this cruise were to determine the distribution of shrimp and the commercial shrimp potential of the area from Willapa Bay to the Columbia River and from Cape Flattery to Destruction Island. If time permits, work was also to be undertaken in the area from Cape Falcon to Cape Lookout.

A 40-ft. Gulf of Mexico flay-type shrimp trawl and two styles of larger Gulf semi-balloon type trawls were to be used.

Earlier in April the *Cobb* completed a cruise off the northern Oregon coast where good commercial concentrations of "cocktail size" pink shrimp were located. The best fishing areas were off Tillamook Head where shrimp were taken at the rate of 2800 pounds per hour with a 72-foot Gulf of Mexico semi-balloon type shrimp trawl and off Seaside where shrimp were taken at the rate of 1350 pounds per hour with a 40-ft. Gulf of Mexico flat-type shrimp trawl.

Southern California Fishermen Welcome Early Tuna Run

Southern California purse-seine fishermen who have been having a slow season because of the shortage of mackerel and anchovies, were heartened last month by a sudden and unexpected early run of bluefin tuna. The first landings were on April 19 and in the next three days over 350 tons were landed. High winds in late April brought fishing operations to a halt, but fishermen expected the run to continue when the weather improved.

The bluefin tuna season in this area normally does not get under way until May 15 to June 1.

The largest schools of tuna ever sighted in th Marquesas Islands were reported by the research vessel *Hugh S. Smith*, when it recently terminated a 53-day cruise in the southeastern Pacific.

Biologists on the boat who reported an abundance of skipjack tuna found good schools in and around the islands on all of 19 days of test fishing. Altogether 76 schools of tuna ranging up to six pounds in size were sighted.

Over 300 of the skipjack were marked with special tags, thus setting up a possible source of information on the skipjack's habits and migrations when the fish are recovered later.

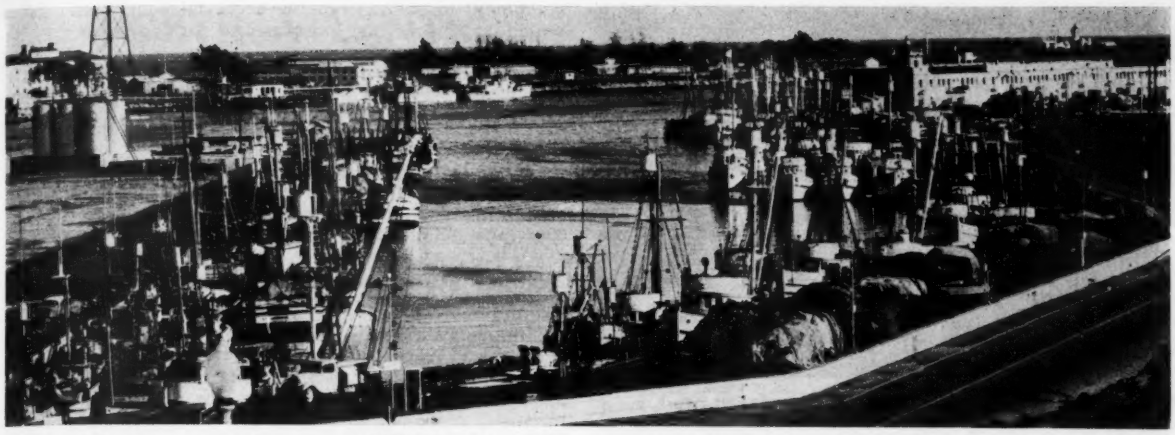
In addition, the *Smith* spent 12 days in the islands surveying Marquesan sardines, which would provide the live bait for tuna clippers.

A chronic shortage of anchovy, the most important skipjack bait fish, is one factor at present limiting the expansion of the industry.

San Diego Tuna Clipper on Tagging Cruise

Marine biologists of the State Department of Fish and Game tagged 1,230 yellowfin and skipjack on a recent 99-day cruise to Central and South American on the San Diego tuna clipper *Southern Pacific*.

In addition to the normal tagging operations, the biologists tested new types of tags, collected marine life speci-



Final work has been completed on the new $400,000 wharf at Fishermen's Slip in San Pedro where the bulk of the port's tuna and sardine boats are berthed. Shown to the left side of the slip, the new 600 foot wharf provides a sturdy wooden dock capable of handling over 50 additional boats. There are lights so that nets can be worked on day or night. Parking space for fishermen's cars is off to the left. With the new dock the slip is capable of handling nearly the entire fleet.

mens and made limited oceanographic studies.

Largest amount of skipjack were found on the fishing banks of Peru and Chile. Best finds of yellowfin were located off Central American and central Peru.

San Diego Clipper Has Successful Trip

A successful maiden voyage ended on March 31 when the tuna clipper *Mary Barbara* arrived in San Diego from South America with a capacity load of 340 tons. The vessel had been at sea only 67 days.

Another successful voyage was made by the clipper *Jeanne Lynn* which landed 250 tons and was out 54 days.

California Tuna Boats Operate Out of Puerto Rico and Peru

Ten San Diego tuna boats have gone to Puerto Rico during the past 18 months to fish for the new Van Camp tuna cannery there. They are the *American Beauty, Chicken of the Sea, Western Ace, Western King, White Star, Sea Magic, Royal Pacific, American Queen, Katie Lou* and *Mariner.*

Eight other California clippers *Talisman, Judy S., Mary Jo, Sea Giant, Lucy Elena, Fatima* and *Sun Splendor* are scheduled to fish for Westgate-California's Peruvian subsidiary at the port of Paita, Peru. The *Talisman* will soon be converted long line tuna fishing.

Westgate has two plants, one at Paita and one at nearby Tierra Colorado. Running this operation are three men formerly from San Diego—John Day, Garnett Stephens and Hugh Latimer.

San Diego Tuna Auction Results

Seven tuna auctions in San Diego during March resulted in the sale of 3,260 tons of tuna from 17 clippers. March sales included 1,234 tons of yellowfin and 2,026 tons of skipjack. Prices ranged from $270-$286 a ton on yellow fin and $230-$246 a ton on skipjack.

California Cannery Employment Improves

Despite the current recession and local setbacks recently in the fishing industry, more people were employed in the fish canning industry in California during February than in the month before.

During February about 5400 persons were employed as compared to about 4300 in January. Of the total, about 3600 were employed in the Terminal Island canneries at San Pedro.

"Helen Ann" Burns and Sinks

A fire caused by a short circuit in the engine room resulted in the loss last month of the 390-ton tuna clipper *Helen Ann* off Cape Blanco, Costa Rica.

Capt. Salvatore Alito and his crew of 13 arrived home and reported that the vessel had just refueled at Puntarenas for the homeward voyage and were seven miles northeast of Cape Blanco when the fire broke out.

The vessel had on board some 270 tons of fish. She was owned by A. T. Procopio and was valued at $300,000.

California Purse-Seiner Lost

Members of the 86-ft. purse seiner *Arlene S.*, which capsized and sank in the Gulf of California March 28, arrived in San Diego by plane on April 1 from La Paz en route to their homes in San Pedro.

John Sestich, owner and skipper, said the *Arlene S.* had 130 tons of tuna aboard, valued at $35,000 when the vessel was struck by high waves which shifted the cargo and caused the vessel to capsize.

The crew was picked up by the seiner *Anthony M.* and landed at La Paz. The *Arlene S.* was valued at $150,000.

California Crab Boats Re-rig for Salmon

Some of San Francisco Bay's 110 crab boats began re-rigging for salmon trolling last month as fishermen and wholesalers agreed upon the price to be paid for the 1958 catch-46 cents a pound for large dressed salmon and 38 cents a pound for smaller salmon.

The season opened April 15 but the reported scarcity of salmon off the coast caused few boats to put to sea. Another reason for the slow start is the reluctance of crab boats to shift to salmon because of the continued high price for crabs.

To Study Japanese-Caught Salmon

Lorry M. Nakatsu, fishery-research biologist was to leave last month for the Orient and adjacent waters to study about 2,000 salmon caught by the Japanese fishing fleet in various areas, including those near Russia.

The samples will be frozen, glazed, packed in plastic bags and shipped to the bureau's Pacific Salmon Investigations Laboratory in Seattle for racial studies.

Studies of the fish are being made for the International North Pacific Fisheries Commission in an effort to learn the origin of salmon taken in various parts of the Pacific.

"JOHNNY L", 48' PURSE SEINER of Joe Lucin, Everett, Wash. has a 265 hp. General Motors Diesel, and uses RPM Delo lubricating oil. Included in her equipment are Plymouth cordage, and Raytheon Fathometer.

Washington to Develop Clam Farming Plan

A long delayed plan of clam farming in Washington state waters is to get a new start under the Governor's fisheries program. In addition to assisting the growth of native clams, the Fisheries Department has new types of seed clams from Japan which arrived last month aboard the *Colorado* at South Bend.

They also have a shipment of Eastern cherry stone clams from the State of Maine ordered. These new types of clams grow in sandy, muddy soil similar to the many thousand barren acres of tidelands in Puget Sound, Grays and Willapa Harbors.

The Department is planning to set up several clam farms in various sections of the state as experimental test plots. Some areas will be for growing seed to be transplanted later, and other areas will be for farming clams.

New Power Plant for Humboldt Bay Concerns Oyster Institute

It has been reported that the Pacific Gas and Electric Co. intends to build an atomic powered electric plant on Humboldt Bay, to be completed in 1962. The Oyster Institute is wondering what the effect of such a plant will be on the shellfish industry, and feel that much research on the problem is needed so that the industry will be in a better position to cope with the conditions as they develop in the future.

It is assumed that the plant will be set up so that no radio-active waste will be released, but experience has shown that even the best systems devised thus far to prevent pollution have failed primarily because of human error.

Some radio-active materials emit rays for 50 or more years. Shellfish have had the habit of accumulating metals, and specifically some of the radio-active ones, and it is for this reason mainly that the Institute believes intensive research is needed.

"Salmon Unlimited" For Washington

A new plan called "Salmon Unlimited" has been launched in Washington to develop new rearing areas for salmon and to raise more brood stock. President of the new group is Jack Peters of Tacoma who believes that salmon runs can be brought back to the way they used to be.

Organizers of SU have the setup on the production end of the salmon cycle and not the harvest end. Thus, there are no conflicts of interests. The group will push for development of salmon rearing areas in sloughs and lakes which up to now have been useless for fish raising.

Washington Production Similar to 1957

Washington's production of food fish and shellfish the first three months of 1958 totaled 21,627,600 pounds about equal to the same period last year.

Strikes hampered production in the otter-trawl and crab fisheries with landings by the otter-trawl fleet amounting to 9,110,300 pounds, compared to about 13,000,000 pounds in the same period last year.

Discuss Standards for Frozen Halibut

A public meeting to discuss the first proposed draft for voluntary standards for frozen packaged halibut was held at Seattle in April.

In attendance were 10 representatives of the fishery industry, the technical director of the National Fisheries Institute, the chief of the branch of technology of the Bureau of Commercial Fisheries, Washington, D. C., and technical personnel of the Seattle Technological Laboratory.

The proposed standard for determination of grade is based on (1) the evaluation of quality factors rated by score points in the frozen, thawed and cooked states and (2) the evaluation of the quality factors of flavor and odor in the cooked state, but not rated by score points; the results thus obtained fix the maximum grade limit that the product can achieve.

Rudderless Fishing Craft For Two Seattle Fishermen

A new type fishing vessel—a boat without either a propeller or rudder, was put aboard the Alaska Steamship Co. freighter *Tanana* recently to be taken to Alaska.

Bill and Jack Clemence, Seattle fishermen, will use the boat in the Cordova area. The craft was built at Hood River, Oregon and instead of a propeller, the 40-ft. boat is pushed through the sea by two jets of water, shot from nozzles under the hull by high-pressure pumps.

The jets can be turned in a 360-degree circle. That makes it possible to use them for steering as well as propulsion.

The boat will be used to pick salmon caught by gillnetters. One of its advantages is the lack of a propeller which is apt to tear up nets.

First King Salmon on Seattle Market

The first king salmon of the 1958 troll season arrived on the Seattle market early last month. The Bay Fish Exchange reported receipt of one small lot of 140 pounds. The salmon sold at 76 cents a pound.

Seed Oysters From Japan

The freighter *Toyokuni Maru*, with about 12,000 cases of oyster seed for Puget Sound and Washington coast plantings was scheduled to arrive in Puget Sound on April 20. The oyster seed was for Upper Puget Sound oyster enterprises, Willapa Harbor and British Columbia ports.

The shipment was the fourth to arrive in this area through the Pacific Oyster Growers' Assoc.

Seattle Vessels Study Salmon Migrations

The *Renown*, Capt. Berger Hansen, one of five Seattle boats which will study salmon migrations in the Pacific this summer was scheduled to leave Seattle on April 24 for waters around the Aleutian Islands.

All species of salmon will be studied in order to determine their movements in relation to the present treaty line separating the Japanese and American fisheries.

Two other boats the *Commander* and the *California Rose* were expected to leave a few weeks later and two Fish and Wildlife Service vessels the *Pioneer* and the *Attu* will also conduct salmon investigations during the summer.

NORTH ATLANTIC

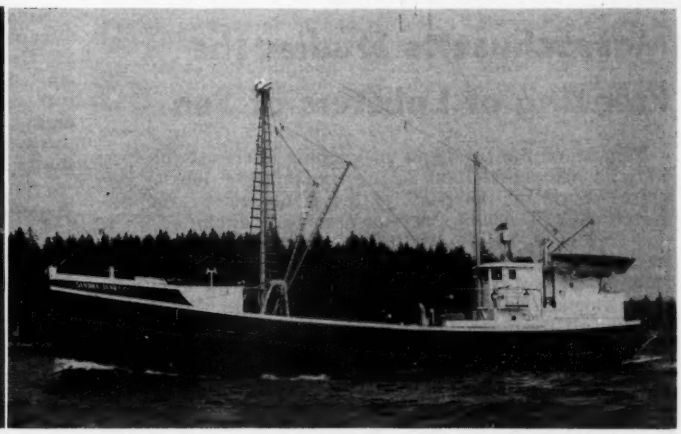
Maine Yard Delivers New Scalloper "Sandra Jane"

The 93-foot scallop dragger *Sandra Jane* was launched and delivered to the New Bedford, Mass. fleet last month by Harvey F. Gamage, Shipbuilder, of South Bristol, Maine. Owned by Joseph Perry, the new vessel is a sister ship of the *Geraldine,* which Gamage completed for Perry in January.

The *Geraldine,* under command of Capt. Leif Lomeland, sailed with the *Sandra Jane* on her maiden trip, and the vessels returned to New Bedford on the same day, each bringing in a 11,000 lb. catch of scallops.

A ruggedly built, fully equipped craft, designed for all-weather scalloping, the *Sandra Jane* has a beam of 21'6" and draft of 10'. Her skipper is Capt. Kaare Ogaard, and she carries an 11-man crew.

The vessel is powered by a D397 Caterpillar Diesel supplied by Perkins Machinery Co., Inc. Rated 480 hp. at 1225 rpm., with Snow-Nabstedt 3:1 reduction gear, the engine drives a Columbian 3-blade, 60 x 40 propeller on 5½" Tobin Bronze shaft, with Goodrich Cutless rubber bearing and Hathaway stuffing box.



Capt. Kaare Ogaard, skipper, left; and Joseph Perry, owner of the 93' New Bedford, Mass. scallop dragger "Sandra Jane". The new vessel was built by Harvey Gamage, So. Bristol, Me. and is powered with a 480 hp. D397 Caterpillar Diesel.

All of the electronic gear was furnished by The Harris Company, Portland, Me., and includes RCA Radiomarine Model CR-105B radar and Model 8060, 150-watt radiotelephone, Bendix Model 155 automatic steerer and DR-12 depth recorder, two Hallicrafters radio receivers and two Loran units. Harris also supplied the vessel's Surrette 8HHG-21, 112-volt batteries, Wall rope and various marine hardware items.

The *Sandra Jane* carries 5500 gallons of fuel, being fueled and lubricated with Socony Mobil products. Her auxiliary power unit is a "Deseco" model with 2 cylinder, FR-2 Lister Diesel, 10 kw. Kurz & Root generator, Quincy air compressor and Marine Products pump. The electrical system has a "Safety" voltage regulator and relay.

Other equipment aboard the new scalloper includes White 7" Constellation compass, Carlisle & Finch 12" searchlight, Hathaway Model 653 winch, 200 lb. Danforth anchor, Edson deck pump, Shipmate oil-fired galley range and hot water heating boiler. Pettit finishes were used on the topsides and interior, and International paint on the bottom.

Gamage now is building an 86' dragger for Capt. Nicholas Parisi of Gloucester, which will be powered by a D397, 450 hp. Caterpillar Diesel with Roots blower and 3:1 hydraulic reduction gear, sold by Perkins Machinery Co. Nearing completion at the yard are a 59' dragger for Capt. John Cottle of Point Judith, R. I., to have a 230 hp. Cummins Diesel; and a 32' lobster boat for Capt. Corliss Farrin of South Bristol, Me. which will have an 80 hp. Penta Diesel.

40-Fathom Fisheries Contract Signed for Rockland Plant

Capt. Henry Gallant, president of the Maine Fishermen's Assoc. and Arthur Thurston, general manager of 40 Fathom Fisheries at Rockland recently announced the completion of negotiations for a new labor contract for employees in the company's fillet plant. The same wages and piece work scales will prevail until April 15, 1959 as were in effect during the past year.

The fishermen are anxious to cooperate with the plant in order to assure the company making a success of its Rockland venture. During the past winter more redfish were landed in Rockland than in Gloucester, and since January 1 more than five and one half million pounds have been processed.

Presently 150 people are employed in the fillet plant; 60 or more on the trawlers and about 35 in the shipyard. Six company trawlers are now sailing as well as three which are privately owned. Two more are expected from the south soon and in addition, four or five boats have been engaged for the whiting fishery operation.

The 40 Fathom Fisheries recently purchased the fish processing machinery at Feyler Fish Co. and have been moving it to their fillet plant on Tillson Ave., Rockland.

The 40 Fathom Fisheries are opening a new whiting operation in addition to their usual redfish filleting, and according to Arthur Thurston, manager, they have a ready market for several million pounds for the coming summer.

Maine Sardine Packing Season Opens

The 1958 Maine sardine packing season legally opened on April 15, but industry leaders do not expect to see any production until late this month or early next.

For the past ten years the old-time early runs of fish have failed to show up and none of the plants are ready that early for operation.

Richard Reed, the Sardine Council's Secretary said there was nothing to indicate whether there would be an abundance or scarcity of fish this season. Since 1951 when fish were very scarce, the industry has had alternate high and low production years until 1956 and 1957 which were two good fish years in a row.

Several less plants are expected to be in operation this season. Two plants have already been dismantled and there are reports of others not planning to operate.

Maine February Landings Increase

Landings of fish and shellfish at Maine ports during February amounted to 6.8 million pounds valued at $755,000. Compared with the same month of 1957, this was a gain of 1.9 million pounds and $204,000. Larger landings of ocean perch were largely responsible for the increased landings. Other species reported in greater volume were pollock, lobsters and haddock.

During the first two months of 1958 landings at Maine ports totaled 11.7 million pounds valued at $1,300,000. Compared with the same period of last year, this was a gain of 4.2 million pounds and $379,000. Ocean perch was the leading species during this period with 7.9 million pounds—3.7 million pounds above those reported for the 1957 period.

New Engines for Lobster Boats

Capt. Harry McClain of Pemaquid, Me. is repowering his 34' lobster boat with a 6DAMR-273 Allis-Chalmers Diesel rated 85 hp. at 2800 rpm., with 1.5:1 Snow-Nabstedt reduction gear.

Capt. Donald Rich of Portland, Me. is getting a new Meteor 115 hp. Red Wing engine with Paragon 2:1 hydraulic reduction gear for his 40' lobster boat. Both engines were sold by Harbor Supply Oil Co., Portland.

Massachusetts Studies the Freezing of Lobsters at Sea

Because of the problems in keeping deep-sea lobsters alive aboard commercial fishing trawlers, the lobster resource found off the coast of Massachusetts by the research vessel *Delaware* has not been fully exploited.

Accordingly, the feasibility of preserving lobsters by freezing them aboard the fishing vessel has been investigated in a pilot-plant study conducted by the Bureau's Technological Laboratory at East Boston. In this study, samples of deep-sea lobsters were cooked alive, frozen in a glucose-salt solution or in a blast freezer, and stored, unpackaged at 0°F. Results showed that the lobsters had a limited shelf life of 2 to 4 weeks. It therefore would not be practical to freeze them for distribution through the normal marketing chain. It would however, be feasible to freeze them at sea for use by lobster producers or restaurants where a rapid turnover is possible.

Gloucester Whiting Industry Could be Improved by Quality Control

Raymond Kershaw, manager of the Gloucester Whiting Assoc. declared last month that the whiting industry is a potential six-million-dollar-a-year business if state legislation would enforce quality controls.

A bill which was introduced in 1955 to improve the industry failed to be adopted and Kershaw announced his intention to present it to the Gloucester Fisheries Commission for their consideration in the near future. The bill proposes a program which is designed to improve the quality of fish on the Massachusetts market.

The bill would also propose a research program to last approximately one year which would be carried out with a comprehensive inspection program. The research effort would be carried out by teams which would investigate every phase of the fishing industry which affects the quality of fish.

To Equip Gloucester Laboratory

The new North Atlantic Technological Research Laboratory in Gloucester will be well equipped, as an appropriation of $193,700 was reported favorably last month by the Senate Appropriations Committee.

As soon as the State Legislature passes a bill to lease a portion of the State Fish Pier to the U. S. Government for 50 years at a dollar a year, the Bureau will award contracts on both the laboratory and the storage building.

Big New Bedford Trash Fish Landings

Red hake, which makes up the bulk of trash fishing during the warm weather, began its spring run early last month. A total of 223,000 pounds of trash fish was landed in New Bedford the first week in April.

New Bedford Wants Improved Unloading Facilities

Inadequate facilities for unloading fish in New Bedford when a large number of boats land their catches in one day were pointed out recently by waterfront leaders.

Some of the boats have been landing their catches at Boston recently because of faster unloading facilities and slightly higher prices.

John E. Linehan, general manger of the Seafood Producers Assoc. stated that heavy landings were sporadic and that it was not right to expect dealers to put extra help on the payroll and have them wait around for the days when more boats than usual arrive in port. At the present, he said, there is no ready solution to the problem.

Woods Hole Tuna Rewards Increased

Rewards for tuna tags turned in at the Woods Hole Oceanographic Institution have been raised from $1 to $5. Only two tags have been returned since the program started more than five years ago and it is hoped that the increase in the reward will prompt more thorough examination of all fish taken and help to make successful this extremely important program to determine migration routes and life history of game fish.

Against Netting Massachusetts Shad

Approval of a bill to prevent netting of shad in coastal rivers was urged by Frederick Wilbur of the State Division of Marine Fisheries at a hearing conducted last month by the Massachusetts state legislative committee on conservation.

The shad population in Massachusetts coastal rivers has been so diminished by netting practices that the runs cannot be used commercially.

Wilbur also recommended that a study should be continued of scallop fishing regulations.

Provincetown Gets New Trap Boat

The newest addition to Provincetown's fishing fleet, the 30-ft. 6-inch trap boat *Harbor Bar II*, was launched from Flyers Boatyard, Provincetown on April 15.

The *Harbor Bar II*, built for Seafood Packers, Inc., has an 11-ft. 6 in. beam and draws four feet of water. Skipper will be Capt. Warren Crawley.

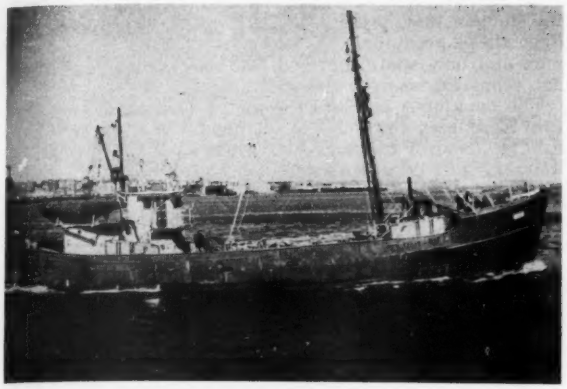
New Navigating Equipment Installed

The new Bendix-Decca Navigator, an electronic instrument that automatically and continuously shows a ship's location, has been installed on two fishing boats by Louis Posner Marine Equipment, Inc., Boston. They are the Boston trawler *Flying Cloud*, owned by Usen Trawling Co. and skippered by Capt. Richard Dobbins; and Capt. Thomas Parisi's dragger *St. Nicholas* of Gloucester.

Two other Boston boats, Usen's *Red Jacket*, and Capt. Vincent Tringale's *Agatha & Patricia*, have been equipped by Posner with Bat Lavoie Radar, having 10" scope.

Seven Gloucester draggers have been fitted with the Bat Lavoie Radar by Posner, using a 5" scope with magnifier. They are the *Serafina N.*, Capt. Philip Nicastro; *Carlo & Vince*, Capt. Anthony Favazza; *St. Therese*, Capt. Anthony Bertolino; *Acme*, Capt. Frank Mineo; *Marianna II*, Capt. Cosimo Parco; *Anthony & Josephine*, Capt. Anthony Favaloro; *Rose & Lucy*, Capt. Carlo Rubino.

The sardine carrier *Alice*, owned by L. Clyde Conary of Stonington, Me. has been equipped with a new Bat Lavoie Radar by The Harris Co., Portland.



North Atlantic Fish Co. officials, left to right: John O'Donnell, Jr. fresh fish sales; Emile Cefalo, treasurer; John O'Leary, port captain. Left, firm's trawler "Ohio" which was repowered with 600 hp. Enterprise Diesel.

Two Boston Fishing Boats Get New Power Plants

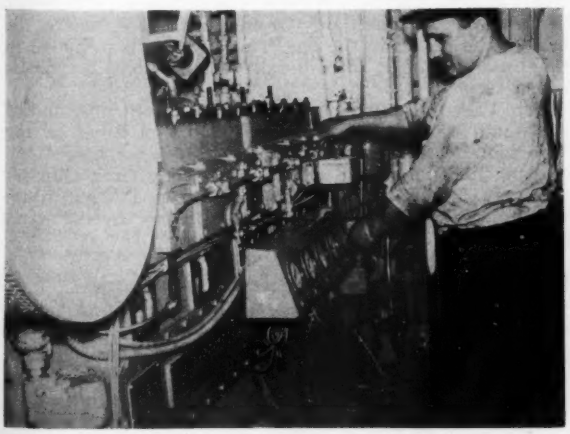
Two high-line Boston vessels, the 96' steel trawler *Ohio* and the 85' wooden dragger *Agatha*, were recently equipped with new Enterprise Diesels to provide increased towing power and steaming speed. In three months since repowering, the *Ohio* has made 6 high-stock trips, while the *Agatha* has landed 8 good trips. Both boats are groundfishing on Georges and Browns Banks.

The *Ohio*, which is operated by Cefalo Brothers of the North Atlantic Fish Co., has a new Model DMM-38, 8-cylinder, 8 x 10 engine rated 600 hp. at 800 rpm. with turbocharger. It swings a 76 x 48 Columbian, Style MI, 3-blade propeller through a Model 180 Western Seamaster hydraulic 2.6:1 reverse-reduction gear. Installed by her owners, the engine is fresh water cooled with Ross heat exchanger. A new 15 kw. "Safety" engine driven generator was supplied by Wharf Machine & Electric Co.

Capt. Domenic Tringale's *Agatha*, operated under the name of Agatha Fisheries, Inc., is equipped with a new Model DMM-36, 6-cylinder, 8 x 10 Enterprise Diesel, rated 400 hp. at 900 rpm. with turbocharger. The engine is fitted with #3788 Snow-Nabstedt 3:1 reverse-reduction gear, and turns a new 60 x 56, 4-blade Columbian Style MI propeller.

Accessories include Marmac pilot house engine control, Westinghouse Tridyne pneumatic gear control, Dodge front power take-off, and Ross heat exchangers for jacket water and lube oil. The engine was installed by Bromfield Mfg. Co., East Boston.

A new feature of both engine installations is the use of an inter-cooler. This unit is operated in conjunction with the turbocharger to cool the air supply to the combustion chambers, thus increasing the efficiency of combustion.



North Atlantic Fish Moves To Boston Fish Pier

A milestone in the progress of North Atlantic Fish Co., Inc. took place last month when the firm moved its Boston packing plant and offices to enlarged quarters at 30 Fish Pier. Headed by the Cefalo Brothers, the Company has forged ahead continuously since its founding on Northern Avenue 25 years ago. Today it is one of the largest fish packers in Boston and Gloucester, and operates a fleet of four boats.

Frank Cefalo is president and in charge of Gloucester operations, while Emil Cefalo is treasurer and oversees production at Boston. Other members of the North Atlantic team include John O'Leary, port captain and fish buyer at Boston, John Soper, port captain at Gloucester, Sidney Cores, frozen fish sales manager; John O'Donnell, Jr., fresh fish sales manager; and Nicholas Di Masi, office manager at Boston.

Regular Boat Maintenance Program

Homeport of North Atlantic's 96-ft. steel trawlers *Ohio* and *Texas* is Boston. They were built for the Company in 1945 at Somerset, Mass. The firm's 87' wooden draggers, *Charlotte M.* and *Hazel B.*, acquired in 1951, are based at Gloucester.

The North Atlantic Fish Co. fleet has a reputation for being steady producers, making 30 to 32 trips per year. Port Captain O'Leary, who has been with the Company for 18 years, attributes their successful operation to a properly planned and executed maintenance program.

The boats are hauled out for complete painting inside and out at least twice, and sometimes three times a year. Fish hold pen boards are changed for painting and drying every four months to insure better sanitation.

O'Leary checks the injectors on his engines three times

Frank Tringale, engineer of Boston dragger "Agatha", shown above, and her new 400 hp. Enterprise Diesel.

a year, oil filters are replaced every third trip, and all electrical equipment is inspected every trip. One reason the North Atlantic boats are able to get in extra fishing time is because haul out and repair jobs are expedited. Mechanics work around the clock, and on week-ends when necessary, to have the boats ready to sail on schedule.

Capt. Vernon Nickerson is skipper of the *Ohio*, which has a new 600 hp. Enterprise Diesel. Capt. Joseph Lundrigan commands the *Texas*, which has a 470 hp. Hendy Diesel. Skipper of the *Charlotte M.* is Capt. Ignatius "Iggy" Giamanco, while Capt. Philip "Scotty" Parisi operates the *Hazel B.* Both draggers have 400 hp. Caterpillar Diesels.

All of the North Atlantic vessels are equipped with RCA Radiomarine radar, telephones and Fischlupes. They use Wickwire trawl cable, Westerbeke fishing gear, Winslow oil filters and Socony-Mobil fuel and lube oil. The trawlers have 105 hp. Murphy Diesel winch engines.

The new Boston plant facilities provide complete, modern equipment for processing, packing and plate freezing of haddock and scrod fillets, as well as for handling fresh fish. The Gloucester plant, which was established in 1942, specializes in whiting, ocean perch and cooked products, and has ample plate freezing and storage capacity. A new whiting plant has been placed in operation at Gloucester, and the cooking department has been completely renovated.

All varieties are produced in breaded and cooked portions. Whiting is available as headed and gutted, butterfly style, consumer pack and 5 and 10 lb. sizes. Ocean perch, haddock and scrod are available as Cellophane pack, layer pack and portion control, in 12 oz., 1, 5 and 10 lb. frozen packages. Fresh fish is generally shipped in 20 and 30 lb. boxes.

Lands Record Catch at New Bedford

The largest catch of haddock by one boat so far this year was brought into New Bedford on April 29 by the dragger *Pauline H.*, Capt. Leif Jacobsen, with 102,000 pounds.

Besides the haddock the *Pauline H.* also had 4,000 pounds of cod, 5,500 pounds of lemon sole and 2,500 pounds of yellowtail.

Record landings were reported for the week of the 14th when on the 18th fifteen draggers landed 481,300 pounds of fish to increase the week's landings to well over 1,000,000 pounds. In addition 43,500 pounds of scallops were brought in.

Booklet Issued on Massachusetts Shellfish

A pamphlet has been published by the State Department of Natural Resources aimed at acquainting commercial fishermen and others who may seek shellfish, with the problems of the industry.

The lobsterboat "Porgy Girl" is owned by Capt. Anton M. Siderewiez of New London, Conn. The 32' boat is powered by a 30 hp. Palmer engine which turns a 22 x 20" Columbian propeller. Equipped with Columbian Rope, Bowers batteries and finished with International paint, she uses Socony Mobil fuel and lubricating oils.

In the pamphlet are described the enemies of shellfish, the danger they present and the need for assistance to fight these predators. It also tells of the onslaughts of man and how shellfishermen can all but decimate shellfish crops for many years.

The booklet is available from the Department of Natural Resources and it is hoped that for the sake of shellfishing, some of the suggestions for preserving this vital industry will be given serious consideration.

Rhode Island 1957 Landings Increase

Landings during January 1958 amounted to 2.9 million pounds, valued at $250,000. Compared with the corresponding month of 1957, this was an increase of 431,000 pounds and $43,000. Otter trawls took 92 percent of the month's total landings and consisted chiefly of butterfish, yellowtail flounders, scup, whiting and fish for industrial use.

Landings of commercially-caught fish and shellfish at Rhode Island ports during 1957 amounted to over 141 million pounds valued at $4.5 million.

Compared with 1956 this was an increase of 611,000 pounds, but a decrease of $134,000 in value. Decreased landings of higher-priced edible fish, hard clams and sea scallops and increased landings of lower-priced industrial fish including menhaden, scup, sea robin and squid caused the increase in quantity and decrease in value.

Species landed in greatest quantities in 1957 were industrial fish, menhaden, scup, hard clam meats, butterfish and blackback flounders in that order.

The majority of the 1957 catch was made by otter trawls—78 percent. Purse seines, floating traps and tongs and rakes accounted for 21 percent and the balance was taken by minor gears. The period of April through September produced over 73 percent of the total 1957 catch.

Rhode Island Legislation Affecting Fisheries

In addition to the inevitable striped bass bill, there are under consideration in the State Legislature, four bills affecting fisheries. The first is a proposal for transplanting undersized quahogs. The second is for expanding the present dredging areas in the Sakonnet River and East Passage. The next is to establish a third dredging area in deep water over a middle and west bay area from Middletown on the East to Quonset Point on the West between the northerly tip of Conamicut Island and waters south and southwest of Prudence Island. The fourth moves the northerly line of otter and beam trawling on the westerly side of Narragansett Bay northward from Quonset Point to Spink Neck in North Kingstown.

R. I. Bill Would Set Flounder Net Size

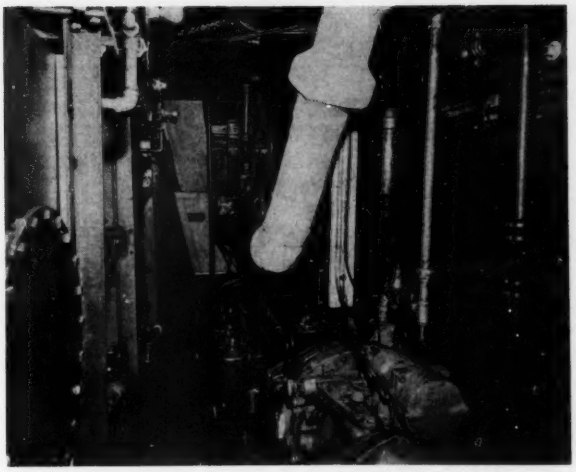
A bill was introduced in the General Assembly last month by Rep. Arthur R. Prevost of Tiverton which would require that nets of fishermen dragging for flounder in lower Narragansett Bay to measure 4½ inches in the body and 4 inches in the bag. The measure is designed to save small flounder, since the present law does not specify net sizes.

Rep. Prevost's bill would also add a small area to the legitimate trawling waters in the Sakonnet River off the Tiverton shore. The orignial bill would have moved the existing line northward all across the bay from Quonset to Tiverton, ending at Fogland in Tiverton. The substitute would move the Tiverton end of the line northward about a half mile to Jack's Island.

R. I. Fishermen Watch for Blackbacks

Fishermen have been asked to be on the lookout for tagged blackbacks which were released in the upper bay by the State and Bureau of Commercial Fisheries men under the Army Engineer Hurricane Barrier Survey project in an attempt to determine the movements of the blackback populations in the Bay.

Capt. Peter Testaverde, skipper of the Gloucester, Mass. dragger "Jennie and Lucia". Right, the vessel's new 335 hp. Model LRDBM Waukesha Diesel with Snow-Nabstedt 3:1 reverse-reduction gear, sold and installed by Hathaway Machinery Co.



Stonington Plans Blessing of Fleet

Stonington, Connecticut fishermen are starting plans for the third annual Blessing of the Fleet program, to be held in July. It is expected to run for two days again this year as it did last and Bishop Bernard J. Flanagan of the Diocese of Norwich, and Gov. Abraham A. Ribicoff are to be invited to head the guest list. Capt. James Henry is again heading the arrangement committee with Bud Jacobs as secretary.

New Jersey Lifts Oyster Ban in Certain Rivers

The taking of oysters in the Great Egg Harbor River and its tributaries from April 1 to May 31 and the Fitney Bit Bed, the Reef Bed in Great Bay and Mullica River from April 16 to May 31, inclusive, will be permitted as an exception to the general conservation order.

The Atlantic Coast section of the Shell Fisheries Council recommended that the taking of oysters from the above areas during the time designated will not be detrimental to the conservation program of the department. It was further announced that after May 31 the areas shall again be closed to the taking of oysters.

Shad Fishing off Long Island

Commercial fishermen were busy last month fishing for shad. However, according to Steve Burke of the Sunrise Fish Co. of Islip, they were not too plentiful. The season was just starting and it was hoped that with better weather, larger catches would be made.

In the 17th and 18th centuries shad were so abundant that they were sold for as little as a dollar a wagonload for fertilizer. But by the middle of the 19th century severe depletion of the runs was reported in all of the principal fishing areas. Artificial propagation was developed in an attempt to restore the runs to their former abundance. More than a billion larvae were released from the hatcheries between 1880 and 1910.

The three main reasons for the present day decline in the industry seem to be overfishing, pollution and erection of dams.

From New York City's Fulton Market comes word that a steadily diminishing demand for shad as a source of fish meat has been noted, but a firm and active market still exists for shad roe.

As shad meat is richly-flavored and requires more than ordinary skill in cooking, it is understandable that the younger generations look for more easily prepared fishery products.

Most of the shad come from New York and New Jersey during April and May and from Georgia, North Carolina, Virginia and Maryland during January, February and March.

Dragger "Jennie and Lucia" Renovated and Repowered

Extensive renovations and repowering have rejuvenated the 20-year-old, 85' Gloucester, Mass. dragger *Jennie and Lucia*. She is owned by Lorenzo Susanno and skippered by Capt. Peter Testaverde, and was built by Morse Boatyard, Thomaston, Me. in 1937. The work was done by Hathaway Machinery Co., Inc. of Fairhaven, Mass., who sold and installed her new Waukesha Diesel and accessory equipment.

A new, step-type, steel trunk, 21 feet long, was placed on the boat, giving added headroom below, and making it possible to move the deckhouse eight feet aft. The jiggermast was relocated forward of the house, being stepped on the trunk. The Hathaway #639 port angle winch was rebuilt and placed on the forward section of the trunk.

Fuel capacity of the boat was increased to 3500 gals. with the addition of two 500-gal. tanks. A new turtleback and dory rack were constructed, and a new Shipmate oil-fired galley range was installed, with 60 gal. oil supply tank on the port side of the doghouse.

The new engine in the *Jennie and Lucia* is a Defender Model LRDBM Waukesha, rated 335 continuous hp. at 1200 rpm., which gives her a speed of 12 mph. It is a 6 cylinder, 8½ x 8½, 2894 cu. in. displacement Diesel, equipped with Snow-Nabstedt #3774 air-actuated 3:1 reduction and reverse gear, swinging a rebuilt 56 x 40 propeller. Accessory items include Ingersoll-Rand air starting motor, Worthington air compressor, Kewanee-Ross heat exchanger, Winslow oil filters, and Twin Disc power take-off which provides straight drive for the winch through a counter shaft.

Hathaway Machinery Co. now is installing Waukesha Diesels in two other draggers. The 83 ft. *Vincie N.*, operated by Capt. Joseph Novello of Gloucester, is getting a new Model NKDBSM turbo-charged engine, rated 315 continuous hp. at 1200 rpm. with #3961 Snow-Nabstedt 3:1 hydraulic reverse-reduction gear and 2:1 Snow-Nabstedt power take-off.

The 75' Boston dragger *St. Marco* is being repowered with a new Model LRDBM Waukesha Diesel, rated 335 hp. at 1200 rpm., utilizing existing Snow-Nabstedt 3:1 reduction gear and 58 x 40 propeller. A new steel trunk will be installed. Owned by Capt. Joseph Giacalone, the boat was formerly the *Carolyn & Priscilla*, having been built in 1945 at Kennebunkport, Me.

Another Model NKDBSM, 315 hp. turbo-charged Waukesha Diesel with Snow-Nabstedt 3:1 hydraulic reduction gear, has been ordered from Hathaway for the 80' Gloucester dragger *J. B. N.* Capt. Dominic Novello is skipper and part owner of the vessel, which was formerly the *Jorgina Silveira*.

GULF OF MEXICO

Louisiana Shrimpers Discuss Legislative Proposals

South Louisiana's shrimping interests met last month to discuss legislative proposals. They had been told at an earlier meeting that they would have a better chance of obtaining suitable legislation if all interests could agree on what was needed.

Point on which general agreement was reached were measures to: confiscate and destroy illegal tackle; change the open season for shrimping in inland waters to May 1 to June 30 and from the third Monday in August to December 20; allow no trawling of any kind in closed season for bait-taking purposes.

Also limit the shrimp catch in inland waters to a 68 count per pound for white shrimp and have a no-count limit on Brazilian shrimp and sea-bob; trawling licenses remain the same but boats using two rigs to pay double; make retail merchants responsible in dealing with unlicensed fishermen and producers.

Also, delete from the act all references to penalties by justice of the peace courts, making all offenses punishable in criminal district courts; make all court punishment non-suspendable; and change the law to make first offense punishment not less than $100 or more than $300 and not less than 15 days or more than 30 days in jail.

It was decided more time was needed to study a plan to raise the shrimp tax from 15 to 50 cents per barrel with the revenue dedicated for specific use by the commission for research and development.

J. R. Robinson, representing the Louisiana shrimp canning industry told the gathering that the canners were willing to be taxed additionally provided the increase in the severance tax on shrimp be dedicated to a program which would increase the induction of fresh water into Louisiana's marshes, bays and lagoons. He also stipulated that the oyster industry, the allied seafood industries and the fur industry each contribute its share and that no tax increase be instituted until such time as a definite program had been made and agreed upon by all interests concerned.

Louisiana Trawlers Bothered By Exploding Drums

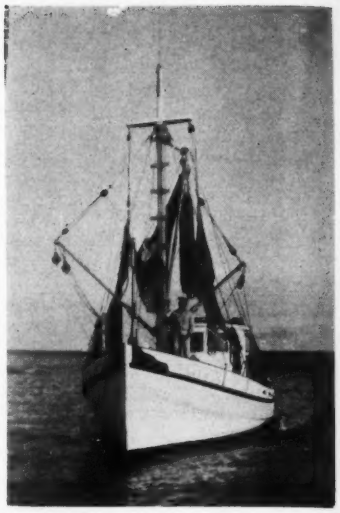
It has been reported recently that on several occasions boats trawling between the 35 and 40 fathom lines southwest of the mouth of Southwest Pass of the Mississippi River have experienced drums becoming enmeshed in their trawls, which, when brought to the surface, exploded.

Boat operators have been cautioned to avoid coming in contact with these drums, and requested that if any small portions of material which might prove to be parts of drums, are found, they should be sent to the District Engineer, New Orleans, giving date, location where found and any other pertinent information. This information may assist in the identification of the agencies dumping the drums.

Dumping ground area regulations cover the Gulf of Mexico and in certain areas no dumping is allowed without advance approval of the District Engineer, New Orleans.

St. Mary Co-op Elects Officers

Herman Wiggins of Morgan City became manager of the St. Mary Fishermen's Cooperative Assoc. recently, succeeding Vernon Jackson. John Davidson of Berwick is the new president, Sebby Cardinale of Patterson is secretary-treasurer. On the board with them are Roy Adams of Berwick, Bernie Wiggins, Morgan City and Dewey Wilson of Patterson. Approximately 18 trawlers comprise the fleet fishing now for the St. Mary Co-op.



Nicholas B. White of Dulac, La., owns the 50' trawler "Capt. E. J. W." powered by a 6-71 General Motors Diesel, 2:1 Twin Disc reduction gear and 32 x 18" Columbian propeller. Equipment includes Northill anchor, Stroudsburg hoist, Linen Thread nets, and U. S. Tiger Brand wire rope. She is finished with Woolsey paint.

Study of Cameron Oyster Area Proposed

Sen. Allen J. Ellender has asked the U. S. Corps of Engineers to look into the possibility of making a study of the Louisiana oyster pollution problem in the Cameron area.

Ellender has suggested that a scale model of the Calcasiue water shed be constructed in order to properly study the pollution problem, which has prevented the marketing of Cameron area oysters for a good many years.

Large beds of oysters are reported in Calcasiue lake and local seafood dealers say a million-dollar oyster industry could be developed there if some way could be found to eliminate pollution so the ban could be lifted.

Mississippi Seafood Company to Expand

Elmer Williams, general manager of the DeJean Packing Co. of Biloxi announced last month that he was going to expand operations. In the past the principal pack of the company has been shrimp and oysters. Plans are for branching into other lines of seafoods and by-products of the Gulf.

A new plant will be built on the Back Bay of Biloxi, the site containing approximately 750,000 square feet, with about 800 feet frontage on the bay.

Pascagoula Yard Launches Menhaden Boat

The 136-foot, menhaden fishing boat, *Tiger Shark*, launched recently by F. B. Walker and Sons Shipyard at Pascagoula, Miss., is described as the largest boat of any type built at the yard. The vessel is capable of holding 1,100,000 fish, is fully refrigerated, and can carry fuel and supplies to stay out for two weeks.

Powered by four General Motors 6-110 Diesels of 300 hp. each, the boat is captained by Clifton Lewis of Pascagoula, who has been with the Walker company for seven years. The boat will operate in Mississippi Sound off Pascagoula. The catch will be processed by the Quinn Fisheries in Pascagoula.

Mississippi Fish Tax Not Passed

A proposal to tax menhaden and scrap fish by 50 cents a ton was apparently considered dead at least for the present legislative session.

The bill, introduced by Rep. Upton Sisson of Harrison County, was recommitted to the Ways and Means Committee.

Alabama Oyster Bed Survey Completed

John Patton, conservation department engineer, reported recently that the survey of oyster beds in the area of Point Clear to Mullet Point was finished last month.

Oyster reefs in the designated area were chartered by establishing reference points on shore. The reefs have not been accurately charted in years, if ever.

Due to rough weather the survey party was unable to use their small boat for the operation and hired a shrimp boat owned by Capt. Randall Manders, based at Fly Creek.

Dredging projects in the Mobile County area will begin about July 15. Top priority in the project will be given to dredging the Deer River bar and the Heron Bay-Gates Landing channel. East Fowl River bar and the opening of a waterway between East and West Fowl rivers will be next in priority. The latter project is supported by commercial and sport fishermen.

Texas to Train Men for Future in Shrimp Industry

The Texas Shrimp Assoc. is sponsoring a training program to recruit and train young men interested in a career in the shrimp industry.

The Industrial Institute of Del Mar College in Corpus Christi, headed by Ted Boaz, will be in charge of the course which will last six weeks.

Courses stressed will be safety, operation of boats and equipment, the correct use and repair of nets, mathematics, navigation, radio and mechanics. Emphasis will be placed on crew relations and the economic, legislative and social aspects of the shrimp industry.

Applicants for the course must be between 17 and 25 years of age, be high school graduates, and be able to swim. Training will be for a period of six weeks, and extend through 8 hours each day through a 5-day week.

Those who successfully complete the course in July will be offered a job in the industry.

New Shrimp Plant for Brownsville

Three long-established Louisiana fishing and canning interests have pooled their resources to build a $250,000 shrimp canning plant at Brownsville, Texas, which will be the only one of its kind on the Gulf south of Cameron, La.

The new corporation will be known as the Shell-Tex Corp. and the plant will process from 50,000 to 75,000 pounds of shrimp daily, employing between 60 and 80 persons.

Seek Docks for Port Arthur Shrimp Boats

A dozen businessmen from Port Arthur, Texas last month proposed a plan to request city permission for use of the municipal basin on the Sabine-Neches Waterway by commercial shrimp boats.

The group said the basin could provide berths for about 100 boats and would mean about $2,000,000 annually which Port Arthur businesses are not receiving now.

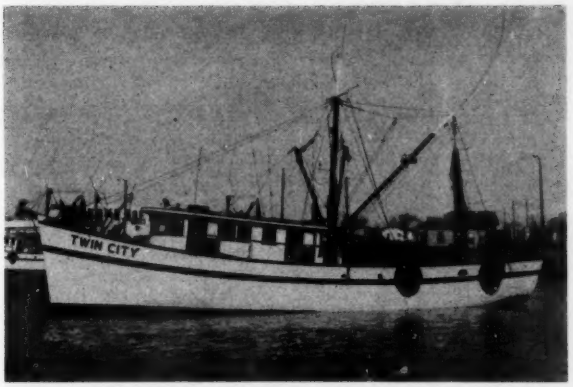
Conn Brown Harbor Improvements

Bids were to be taken April 28 for extensions to Conn Brown Harbor, Texas, including additional dock area and channel and storm protection.

Approximately 224,000 cubic yards of material will be dredged from a new channel and the spoil used to build the east and south sides of the harbor.

These improvements will increase the dock area 35 percent and provide 2,800 feet of new waterfront property added to the facilities at the harbor.

Work was scheduled to start immediately in order to provide extra docking facilities to accommodate the influx of Florida trawlers expected during the summer.



"TWIN CITY", 68' SHRIMPER belonging to Alvah Galloway, Port Isabel, Texas. The boat is powered by 6-110 General Motors Diesel with 40" x 52" Columbian propeller. She has a Northill anchor, Bendix depth sounder, 75-watt RCA Radiomarine radiotelephone, Linen Thread Gold Medal nets, and Stroudsburg hoist.

Exploring Redsnapper Possibilities in Gulf

The exploratory trawler *Silver Bay*, operated by the Fish & Wildlife Service, has been using a roller rigged trawl over rough stony bottoms in the northeast Gulf of Mexico, to explore redsnapper possibilities as a commercial fishery.

The *Silver Bay* made 44 drags in depths of from 15 to 60 fathoms. Small quantities of redsnapper were caught in 20 of the hauls, but no locations were found which produced snappers of commercial size.

Several attempts were made to fish next to snapper "lumps", but these always resulted in torn and damaged nets. However, the gear did function in several areas where the bottom was too rough to use regulations fishing gear.

In one location south of Mobile Bay in 20 to 35 fathoms, croakers, porgy, sand trout and spots were caught mixed together at a rate of 3,000 pounds in 90 minutes, or one ton an hour.

Gulf Shrimp Landings During April

Unfavorable weather for Gulf shrimping during the 30-day period ending April 20 did not prevent shrimp landings from keeping pace with that of the previous month. Landings at principal Texas Gulf ports totaled 1.3 million pounds of heads-off shrimp. Mixed white and brown grooved showed up at Galveston and Freeport on the upper coast.

Gulf Coast port landings, including Florida west coast, Mississippi, Alabama, Louisiana and Texas showed a decisive gain over the last 30-day period. Shrimp landings (heads-off) totaled 4.5 million pounds, as compared with 3.6 million pounds last period.

Increases were also noted in the receipts of edible finfish, oysters, and crabs. Total seafood production for this period was 5 percent above that of the same period in 1957.

"Oregon" Returns to Rockport

The exploratory vessel *Oregon* returned to Rockport, Texas, recently from a six weeks, cruise exploring between the Mississippi Delta and Cape San Blas with mid-water trawls.

Fifty-two sets were made, guided only by depth recorder indications of schools of fish in mid-water, where normally fishermen using old methods and gear would not be able to locate them.

The sets indicated the presence of many species of fish and schools of herring-like fishes.

SOUTH ATLANTIC

North Carolina Shrimp Season Opens with Optimistic Outlook

Guarded optimism for the North Carolina shrimp season, which opens annually shortly before May 15, marks fishermen from that state and migratory fishermen planning the trip from Florida. Shrimping, a major North Carolina fishery, last year accounted for $2,263,000 and 4,722,000 pounds heads off, 7,933,000 pounds heads on.

Several outlooks prevail for 1958. Some old-timers predict a heavy summer crop after the hard winter, a theory that follows traditional thought. Some producers predict a poor season because of the low temperatures which caused the Neuse river bottom to look like a "graveyard of fish". Some shrimpers believe that the Japanese, rock, red, or coral shrimp as it is variously called, being found in sporadic deep-sea catches will mean an increasing value to total income.

Many phone calls have been received from Floridan shrimpers asking if they should bring boats up, said Dr. Chestnut, director of the University of North Carolina Institute of Fisheries Research. The answer won't be known until early in the season as the weather has been too cold. But, with April, the big warm-up month, under their belts, fishermen are preparing for a season which they hope will exceed that of 1957.

Declares Harry B. Fulcher, of the Clayton Fulcher Seafood Company in Atlantic, "The early spring run will probably be hurt, but not the summer and fall catch." An official of the Carteret Fish Company, Beaufort says they are hoping the off-shore shrimp will come in from the deep sea rocks.

Reports of findings of Japanese shrimp continue, with significant potential. The shrimp have a count of about 30, with tough shell and sweet meat not unlike lobster and crab. They have a reddish color even before being cooked. They are found near the Gulf Stream, 10 to 20 miles off the Outer Banks.

An important regulation banning Saturday shrimping was passed in April by the State Board of Conservation and Development. Sunday shrimping is already prohibited. According to the new regulation, shrimping in inland waters will not be allowed from 8 a. m. Saturday until midnight Sunday. The regulation was requested by the North Carolina Fisheries Association and was passed by the Commercial Fisheries Division of the State Board.

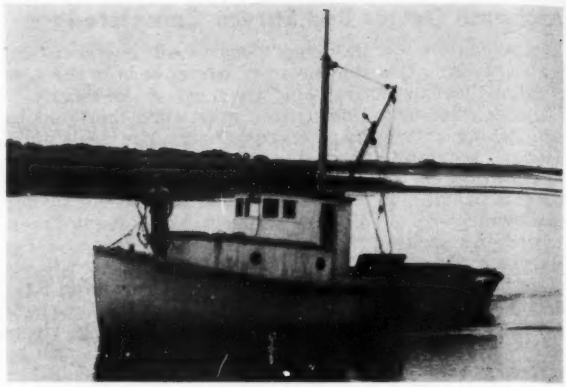
Lively discussion accompanied consideration of the regulation. Protagonists said the measure was in the interest of conservation, explaining that by elminating week-end operations the shrimp have a chance to school up and grow larger. It was noted too, that the crews of large trawlers like to quit work after making port from a Friday trip. Ray Watson of Hobucken was spokesman for those in favor of the move.

Opponents of the measure said it was discriminatory, in that small trawlers would be penalized by large operators. Some small fishermen claim that they sometimes catch enough shrimp on Saturday alone to pay for the operation of a small rig. Earl Oglesby of Newport and James Robertson of Morehead City led the opposition.

North Carolina Quarterly Fisheries Report Given

C. G. Holland, state commercial fisheries commissioner gave a quarterly report on the fishing industry last month before the members of the Board of Conservation and Development.

He stressed the value of the recent cruise of the Fish & Wildlife Service vessel *Delaware* off the North and South Carolina coasts in search of red snapper.



THE "BOBBY M", 42' shrimper has Linen Thread Gold Medal nets, Hancock hoist, and Columbian rope. She uses Esso fuel and lubricating oils and has Caterpillar 52 hp. engine turning Columbian 32" propeller. She is owned by Larry Hewett, Shallotte, N.C.

He also reported that the deep sea trawlers during the quarter covered, had one of their best seasons. The weather had its effect on this type of fishing, but when the boats were able to work they made good catches.

One of the largest catches of croakers ever made in one day was landed during this period. It was estimated that this catch totaled about one and a quarter million pounds. These boats also made fair catches of trout, sea mullets, flounders and blow fish.

The oyster season was not too good due mainly to bad weather. However, the oyster producing waters of the state had the best catch of spat in many years. If these baby oysters live, a good harvest should be available in two years.

Virginia Scientists Consider Importance of Salt Marshes

Dr. J. L. McUugh and Dr. J. D. Andrews of the Virginia Fisheries Laboratory returned recently from a conference in Georgia where scientists considered the important of salt marshes in relation to abundance of oysters and other valuable seafoods.

Biologists have found that salt marshes play an essential part in the lives of seafood animals. Accumulated plant and animal material on salt marshes is washed off by high tides and heavy rains, causing important changes on oyster grounds and in the nursery grounds of crabs and migratory fishes. These materials can cause damage by using up the oxygen supply of the water and are believed to lead to such catastrophes as the 1955 kill of oysters in the Rappahannock River.

The conference brought together biologists, geologists, oceanographers and other scientists interested in the origin and role of salt marshes in the economy of the sea. Discussions at the conference brought to light many important facts that will help Virginia reap maximum benefit from her marine resources.

Mattaponi Shad Run Underway

The Mattaponi River shad run began early last month and from then until early June, when the run will be completed, these Virginia fishermen will tend their shad drift nets from special boats which are as much a part of local tradition as the shad run itself.

The Mattaponi boat is a unique craft found nowhere else. Developed generations ago for the express purpose of fishing drift nets, the design has been handed down from father to son.

Gearge Turner of King and Queen has built hundreds of these vessels and was working on his latest one last month. The vessels are flat-bottom and range from 12 to 20 ft. in length with a beam of 34 to 48 inches. They are powered with motors from 5 to 25 hp. They are built without a keel in order to be able to go up streams where the water is shallow.

Good Season For Virginia Oyster Dealers

Oyster production on the coast began slowing down late last month as it usually does that time of year. The Billups Oyster Co. at Williams Wharf was closed and other houses were expected to close by May 1 and spend the time between then and fall getting ready for the fall season.

This has been one of the best years for oyster dealers for a long time as regards source of supply and over-all profit. Virgina has been favored by diminished competition from other states which was due either to crop failure from natural causes or to adverse weather.

In the Hampton Roads area over 24 hour periods, the supplies ranged from 2,000 gallons to 3,900 gallons shucked. In the Northern Neck area, the supply varied daily throughout April from 800 gallons to 1,900 gallons, and on the Eastern Shore, there was a production of from 200 to 300 gallons daily.

Marine Science Program At University of Miami

A doctoral program in marine sciences has been established by the University of Miami.

The Ph.D. plans follow an active graduate program which has resulted in the training of students in marine biology, fisheries and oceanography.

Ph.D. degrees will be offered in the three fields of marine biology, fisheries and oceanography, under the department of marine sciences. The academic department is staffed by senior members of the Marine Laboratory, engaged in a wide variety of research projects.

Courses in ecology, physiology, biochemistry and taxonomy of marine animals, and courses in phycology, plankton and other specialized aspects of marine biology are offered by a staff including Dr. H. B. Moore, Dr. Charles Lane, Dr. F. G. Walton Smith, Dr. Gilbert Voss, Dr. Harding Owre. Fishery icthyology training is offered by Dr. C. P. Idyll, Dr. C. Richard Robins, Dr. John Randall and Edwin S. Iversen.

The oceanography courses, including geological, chemical, physical and meteorological aspects, are taught by Dr. Fritz Koczy, Dr. Cesare Emiliani, Dr. Eugene Corcoran, Homer Hiser and Sigmund Miller.

The Graduate School of the University of Miami will accept applications for the program beginning in October 1958, for entrance to the program in the fall of 1959. Inquiries may also be addressed to Dr. C. P. Idyll, Chairman of the Department of Marine Sciences, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

Florida Shrimp Catch at Key West Reaches New High

Shrimp boats fishing out of Key West landed what may be an all-time record of 1,726,900 pounds of shrimp during March, including 1,680,700 pounds from the Tortugas area and 46,200 from the Campeche beds off the coast of Mexico.

The shrimp catch for the week ending March 28 was almost double the catch for the same week a year ago, and the catch for the week ending April 4 was 615,000 pounds from the Tortugas area. Added to 6,000 pounds from the Campeche beds the total for the week amounted to 621,000 pounds. During the same week in 1957 the catch was only 164,900 pounds.

Seek Fort Myers Channel Improvements

Representatives of the shrimp industry and Chamber of Commerce were scheduled to meet last month with the Corps of Engineers in Jacksonville to discuss improvements in channels at Fort Myers Beach and the Caloosahatchee River.

Numerous mishaps involving shrimp boats in Matanzaz Pass at the Beach and in the river have been reported and Ken Pacetti of Diesel Engine Sales said his records show repair bills to craft which have run aground are tremendous.

Paul Franklin, D. W. Ireland, Carl Abbott, John C. Ferguson and James B. Roberts were appointed to represent the group before the engineers. Others present at the meeting were Alan Robertson, manager of the Chamber; Mayor Heard M. Edwards, Paul Herring, M. D. Bassetta, Carl Michaels, John Pterudis, M. D. Bassetta and Charles M. Roberts.

W. D. Simpson and A. C. Dickey of St. Mary's, Georgia, are the owners of the 67' "Miss Ginger". The 6-71 General Motors engine, cooled by a Walter keel cooler, turns a 42 x 30" Federal propeller. Equipment includes Marine products auxiliary pump, Goodrich Cutless bearing, Ritchie compass, One-Mile-Ray searchlight, Stroudsburg hoist, and Columbian rope. She was built at Diesel Engine Sales, St. Augustine.

New Trawler Launched at Fort Myers

The 70-foot *Coral Queen*, seventh shrimp trawler to be built at General Marine Boat Yard, Inc., Fort Myers Beach, Florida, since the yard opened last September, was launched April 19. The vessel was built for Charles and Hilbert Kiesel of Fort Myers, and is powered with a D342, 200 hp. turbocharged Caterpillar Diesel.

On May 10, the yard was scheduled to launch another 70-foot shrimper, the *Flying Fish*, for Capt. Carl Erickson of Fort Myers. She will have a D342, 157 hp. normally aspirated Caterpillar Diesel.

Sponge Divers Arrive at Tarpon Springs

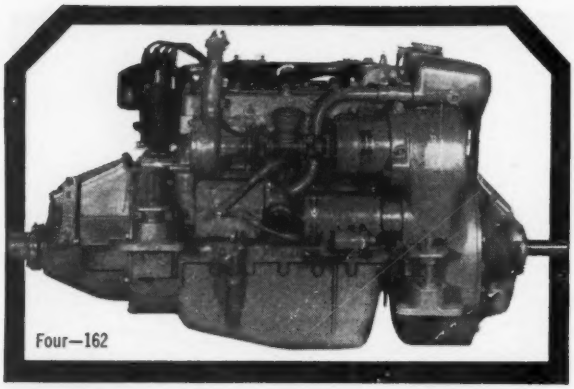
Four sponge divers have arrived in Tarpon Springs, Fla. from Greece as a result of the efforts of local and governmental aid, to work in the industry. The four skilled divers will be permitted to stay in this country as long as they work in the industry, according to the law.

Only so many divers as are needed will be allowed to enter the United States. All four of the divers now here meet these requirements. One has already gone out on a boat and the other three are preparing for work.

Texas Trawlers Operate Off Florida

Texas shrimp trawlers are fishing in Lee County waters for the first time in the shrimping industry's history—at least as far as this immediate area is concerned. Twelve boats of the Lyco fleet from Aransas Pass, Texas are fishing from the Beach Shrimp Co. dock in addition to about 25 other boats; 22 are fishing from the McDowell Shrimp Co.; 20 from St. George Packing Co.; 20 from Island Packing Co. and 25 from Tringali Packing Corp.

Catches have been averaging two to three boxes per night which is as good as catches found when boats first fished the beds off Sanibel Island two years ago.



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This interesting engine is unusual by ordinary standards, but the fact is that it's just another example of Gray's ability to meet the needs of workboat service. It has the following equipment:

1	Fresh Water Cooling System with high capacity centrifugal pump
2	Thermostatic Temperature Control
3	Magneto Ignition
4	High capacity, Constant-voltage Generator
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7	Adjustable Rubber Mountings

Here are some other important details of this compact engine: First of all, it is a "Lugger", our name for an engine with low compression ratio and heavier flywheel, designed for superior idling and the ability to handle big loads. It has counter-weighted crankshaft for smoothness. It is available with reduction gear ratios to 3.5:1, and with either manual or hydraulic reverse gear.

This is a 4 cylinder engine rated 63 HP. The same design and equipment are available in Gray's larger 6 cylinder engines, up to 200 HP. All have the following features:

Heavy-duty type of cylinder block, chrome-nickel-iron alloy, with good thick walls, not subject to distortion

The design provides for water all around every cylinder bore, mighty important in a workboat engine

Gray also builds 4 and 6 cylinder Diesel engines in the useful power range from 25 to 200 HP. If you want more information on these heavy-duty engines, write and tell us about your boat. We'll send free literature promptly.

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Maryland Watermen Organize To Conduct Seafood Survey

A good representation of watermen, oyster shuckers and packers met in Princess Anne last month for the purpose of forming an organization to make a candid survey of the seafood industry and bring in recommendations that can be helpful to everyone engaged in it.

The survey is to be strictly a seafood survey by seafood people, with an executive committee consisting of three members from each tidewater county representing the various departments of the industry. Everyone present was of the opinion that something of value could be gained by such a survey, and lead to increased oyster production.

The meeting was presided over by Harold Bessett of Salisbury and among the speakers were Charles Marsh of Smith's Island, Elbert Bell of Crisfield, Loren Sterling of the Milbourne Oyster Co., Ive Todd of Cambridge and Lloyd L. Simpkins, Democratic candidate for the State Senate.

The watermen from Smith's Island reported that they were more than willing to put up money to pay for a survey and that petitions already had been signed by 80 men who would contribute money toward the survey.

A meeting was held at Fishing Creek last month at which about 350 watermen from Hooper's Island were present to hear Tidewater Fisheries Commission representatives tell of the program for planting shells and oysters in Dorchester waters. Also at this meeting a discussion was held of the proposed survey of the seafood industry.

Salvaging Spat May Save Maryland Oystering

A new angle on oyster production was announced last month by Egbert L. Quinn of Crisfield. He believes that by saving the spat, the oyster business itself may be saved. His idea is that only about 30 per cent of the oyster spat, which are young oysters, actually catch to shells or any other objects in the waters of the state.

He believes that by experiment and research double the number of spat could be saved which would mean that oyster production could about be doubled.

Quinn predicts that some device could be invented which, when placed on the bottoms in sections that have proven themselves excellent spawning areas, would catch a greater proportion of oyster spat than is now being caught. Once the spat caught and grew large enough to be handled, they could easily and cheaply be transplanted to good oyster growing areas, where they would grow to maturity quickly.

Extension for Radio Frequency Change

Shrimpers have been given a time extension by the Federal Communications Commission to change the frequency of their radio telephones for night use.

Rep. Paul G. Rogers had requested an extension because many shrimp boats would be at sea when the extension was scheduled to go into effect—April 1—and wouldn't be able to make contact with the Coast Guard or home port at night.

The extension gives the shrimpers until July 1 to have the new frequency operating.

Conservation Officers Can Seize Gear

Attorney General Richard Ervin ruled on April 2 that Florida Conservation officers have the right to seize fishing equipment of persons arrested for illegal salt water fishing. He advised Conservation Director Ernest Mitts that in the event of a conviction such equipment would be forfeited to the board of conservation for disposition as provided by law.

Great Lakes Show Improved Trout, Herring Catches

Lake Superior has come up with somewhat more lake trout than last year at the same time, and all of the Great Lakes have produced more lake herring this year than for a corresponding period last year or the year before. However, whitefish catches have been light in comparison. Although herring have not noticeably been affected by the inroads of the sea lamprey, both lake trout and whitefish had been seriously depleted by the predator lamprey eel. The work of the U. S. Fish & Wildlife Service in killing off sea lamprey in Lake Superior streams seems to be showing results.

In the eastern end of Lake Superior, where many small lake trout have been planted in past years—particularly by Tom Brown fisheries, as well as the Michigan Conservation Department—fairly good catches of this prized species have been made with consistent regularity. Whether two and three year old trout are too fast for sea lamprey is debatable, but many larger fish have been taken which have no indication of lamprey scars.

Lake herring hauls in the big lake have been good in many areas, and the smelt take was sizeable during the spawning run.

In the Green Bay area of Lake Michigan, good takes of smelt have been made, particularly in the northern areas of the bay. Walleye catches are on the upswing and many of the commercial fishermen are now netting for them. Lake perch is also going strong. Beaver Island commercial fishermen were taking perch all winter long in nets despite the severe weather. Good catches of lake herring were reportedly taken from northern Lake Michigan.

From Lake Michigan the chub production, which has been somewhat light, is now on the upswing with producers getting better hauls. Some yellow pike and improved perch takes are reported by eastern shore producers. Rough fish—sheepshead etc.,—catches are good. Smelt takes by Illinois, Wisconsin and Michigan fishermen from Lake Michigan are consistently good.

On Lake Huron, where fishing pressure has increased with warmer weather, fairly good catches of herring, perch, bullheads, and other fish were reportedly made. In the Georgian Bay area some whitefish have been taken. Sturgeon catches in Georgian Bay were better than before, too. Carp netters were getting good catches of carp.

On Lake Erie spring hauls are getting better. Most of the species consist of sheepshead, carp, yellow perch, yellow pike, smelt, some herring, pickerel, bullheads, etc. As yet the blue pike are not in good production, with light catches reported in the eastern waters.

Lake Ontario commercial fishermen are reportedly getting good commercial quantities of smelt, perch, bullheads, herring, sheepshead, rock and white bass, and some whitefish.

110th Birthday of Booth Fisheries

Booth Fisheries Corp., Chicago, largest fish and seafood company in the country, is marking its 110th birthday.

The business was started in 1848 by Alfred Booth who first began by buying fish from lake fishermen and selling them on a pushcart on Chicago's streets. In a year he had enough money to set up his own headquarters and buy eastern seafoods for sale in the midwest.

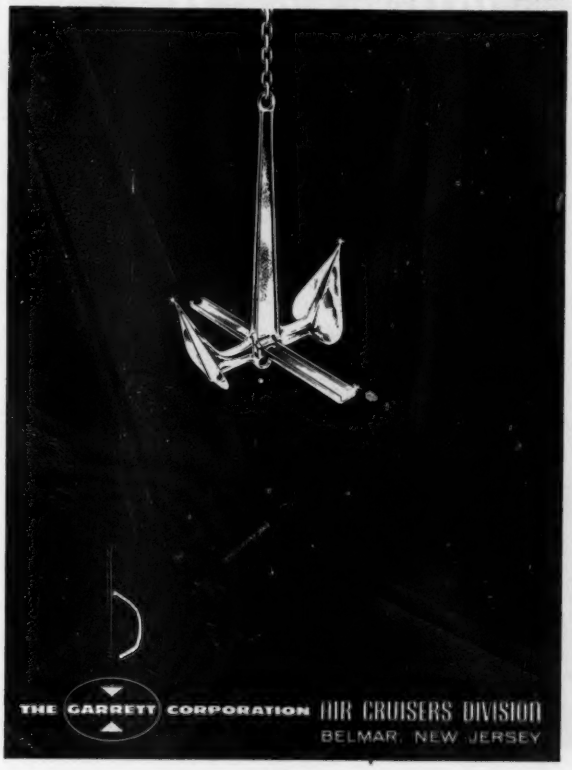
Erie Netting Results Favorable

Nine hundred pounds of perch, 100 pounds of pike and 35 pounds of whitefish were reported recently by the three Dunkirk tugs laying nets in Lake Erie's waters.

Thomas Skrypek, co-owner of the Dunkirk Fish Co. said that the *Mary S.* set nets for the first time near

NORTHILL

DIGS FAST . HOLDS FAST... BREAKS OUT EASY



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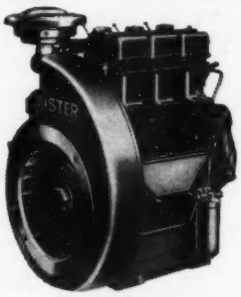

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Convincingly service-proved, LISTER Diesels (3½ to 600 HP) provide auxiliary power for over ¾ of New England's fishing fleet; propulsion and auxiliary power for fishing boats, work boats and other commercial craft coast-to-coast and the world-over. Parts and service in principal coastal and river ports.

1 to 3 cylinders
3½ to 30 BHP @ 1800 r.p.m.
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Silver Creek and the results were favorable.

Stanley Stuczynski, skipper of the *Mary S.*, said that it marked the first time this season that pike had been caught.

Stanley Kulpa's *Gloria Mae*, which was captained by Samuel Aikens, reported fishing to be poor. He said fishing results for the first few days was fair, but then things slowed down considerably.

The *G-W*, owned by Herbert Gloff, reported results as fair, and the vessel netted 100 pounds of whitefish and 200 pounds of perch.

Superior Smelt Run Begins

Smelt dipping in southern Wisconsin harbors began early last month. First fish usually show along the beaches in the vicinity of Chicago about April 1 and within a week or 10 days thereafter Milwaukee smelt dippers are taking them in quantity.

The smelt move in at ports north of Milwaukee until the run hits a peak toward the end of April.

The smelt of Lake Superior usually do not run in numbers until about the first week in May.

Commercial fishermen in mid-April were taking up to 20 tons of smelt a day in the Algoma-Kewaunee area of Lake Michigan. A heavy smelt run was also reported in the Ashland area of Lake Superior.

Fishermen Urged to Avoid Submarine Cable Areas

FROM Newfoundland to Scotland, California to Hawaii, and from the state of Washington to Alaska, voices now travel beneath the high seas via submarine cables to breach the gaps of time and space. The cables run a sure path across the ocean floor, eventually reaching the shoreline of a distant land to establish contact with a telephone receiver.

Like the voice which travels along miles and miles of land cable, the submarine version is ever in danger. While the seamount slides and the underwater volcanic eruptions are of great concern, the primary hazard to all types of cable, be it telephone or telegraph, is the hundreds of fishing vessels active in and around cable areas.

As an example of how serious the problem is, between 1955 and 1957, one cable company, in one area, suffered 52 cable failures, all attributed to fishermen. Six of the company's seven cables in that area were out of operation at the same time.

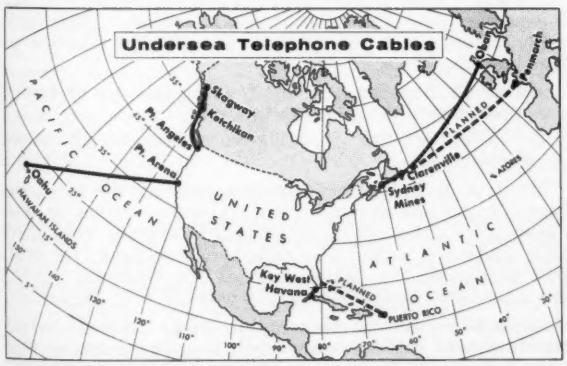
The American Telephone and Telegraph Company has, since 1955, been engaged in placing deep-sea cables between the United States and various points around the globe. In studies of many problems involved in these projects, engineers discovered the fishing trawler posed probably the greatest hazard to cables. The company has taken measures to protect the cables from attacks of a foreign enemy, blast-resistant terminal buildings, for example, but there seems to be no hard and fast solution to preventing the damage caused by fishing trawlers.

Efforts to skirt known fishing banks off Newfoundland, Seattle and Alaskan coastlines were an important part of the early planning stages and, as a result , the new underwater telephone links were put to sea away from the normal course of the trawling fleets. However, since trawlers often depart from the fishing banks to obtain their catches, the danger to cables remains constant.

Of course, there are two sides to the story. It is true that when a cable is cut or damaged, vital communications are interrupted and many thousands of dollars are spent to restore service. But, on the other side of the coin is the cold fact that the fisherman often suffers a severe loss.

Should gear become entangled with deep-sea cables, fishermen face the loss of nets, otter boards, and in some cases, life itself. Unlike telegraph cables, the recently established choice links in the Atlantic and Pacific carry as much as 2,500 volts of electricity. Attempts at severing voice cables from trawling gear could seriously injure the fisherman.

Attempting to free their gear, fishermen have cut cables and damaged their own equipment in the process. The end



Existing as well as planned submarine telephone cable systems and their proximity to trawler fishing areas, are indicated on the map. Long Lines Department of American Telephone and Telegraph Company is seeking to avoid trawler areas when mapping underwater cable paths. Four telephone cable systems have been put to sea since 1951 and two more are planned for 1959.

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result was interruption of vital telegraph communications between continents and loss of work—days, weeks or months—for the fishermen involved.

A three-point plan aimed at reducing trawler-cable mishaps has recently been launched by the Long Lines Department of American Telephone and Telegraph Company. The company, responsible for the first underwater telephone cable systems between the United States mainland and Europe, Hawaii, and Alaska, is now ready to start construction of two more voice cables systems. One system again crossing the Atlantic with landing sites at Clarenville, Newfoundland and Penmarch, France. The second voice planned goes south from Florida to Puerto Rico.

Trawler captains have been asked to (1) familiarize themselves with charts showing underwater telephone cable routes and to avoid them as much as possible in trawling missions.

(2) avoid dragging nets or dropping anchors or heavy gear near cable routes, and

(3) avoid starting trawling runs that would bisect cable positions.

Mr. J. A. Bowman, cable project manager for the Long Lines, urges fishermen to use extreme caution in the event a trawling net or otter board becomes entangled with underseas cable. The telephone company, he said, will reimburse the fishing trawler for whatever equipment has been damaged or lost in order to save the cable.

Application of this three-point safety formula when trawling near cable positions will protect telephone and telegraph communications as well as trawling equipment, Bowman stated. It is a mutual problem and one that must be solved on the basis of mutual consideration. Charts showing the cable areas can be obtained by writing to A. J. Bowman, Long Lines Department, American Telephone and Telegraph Company, 32 Avenue of the Americas, New York, 13, N. Y.

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Pacific Trawling Trends

(Continued from page 12)

of the United States. It is obvious, however, that accurate offshore navigation, the ability to survey quickly bottom contours, and to maintain desired depths and position has increased the fishermen's knowledge of fishing grounds and subsequently the ability to harvest groundfishes.

These aids have undoubtedly played an important role in the recent expansion of trawling to deeper waters along the continental slope. Active deep-water trawling started off the northern California coast shortly after World War II and, by 1950, trawlers were prospecting deeper banks off Oregon and Washington. Prior to 1950, less than 5 percent of the annual catch was estimated to have been caught at depths greater than 100 fathoms.

By 1954, close to 25 percent of the total catch was being harvested at depths ranging from 100 to 200 fathoms, and during 1956 trawlers often reported catches at depths exceeding 250 fathoms. Off Eureka, Cal. vessels have prospected at depth exceeding 300 fathoms. This expansion to offshore grounds was made feasible and practical by electronic aids.

Little Change in Nets

Trawl nets in use along the Pacific Coast vary considerably in size and design according to the geographic areas and racial background of the fishermen. Both the eastern two piece net and the western four piece trawls are common, and in Central California, fishermen of Italian descent use a modification of the paranzella net for otter trawling. Nets vary in cut, thread size, breadth and length according to the fishermen's preference but are essentially similar to nets used in all the world's major trawl fisheries.

The only notable change in net usage has been the adoption of larger meshed nets or cod ends in conformance with mesh regulations of Pacific Coast fisheries agencies. A minimum 4½ inch between the knots (stretch measure) mesh regulation (with minor variations between states) is now in effect along the Pacific Coast.

Mechanization in Trawl Gear

The first trawl cable meter was designed around specific needs of Puget Sound trawlers by the Olympic Instrument Laboratories in Vashon, Wash. The meter, which has become increasingly popular among local fishermen, replaces the use of cable markers to determine the amount of warp spooled off winch drums.

Drum trawlers were introduced to Puget Sound during 1954 when several regular trawlers changed over to the drum method. Drum trawlers use a power-driven drum similar to that used with the drum seine, but with a somewhat smaller spool.

In operation the trawl doors are brought to the davits, the wings of the net shackled to the reel core, and spooled on the drum. The cod end is picked up in the conventional manner with slight variations. The drums are powered with hydraulic drive and are designed with four speeds forward and reverse.

Operators of drum trawl vessels report that they can fish in heavier weather and can haul the net more quickly than the conventional trawlers. Drum trawling has eliminated restacking the net and no lifts of the net are necessary prior to bringing the catch aboard. The drum trawl method of fishing has been patented and its use up to the present time has been restricted to vessels owned by the designers.

The addition of better fishing gear, new net designs, electronic aids, increased mechanization, better vessel design and increased power have all combined to bring about trawl efficiency. Boat efficiency might be expressed as the total of the efficiency each item contributes to the fishing effort. The most important variable, which would influence the efficiency of any single item or of the gear and vessel as a whole, is the experience of the crew and skipper. Fishing knowledge, experience, and intelligence are the key to the greatest efficiency obtainable from the vessel and the fishing gear.

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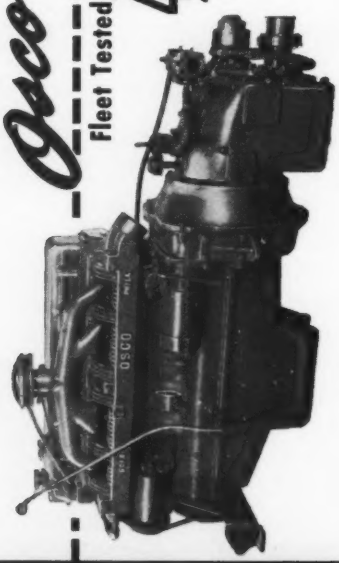

1/4 MILLION proved ENGINE/HOURS

Fisheries Convention

(Continued from page 11)

in handling the shrimp that are caught, so that quality will not be impaired.

Industry members spent evenings teaching how to rig blocks, splice rope and cables, set doors, and mend nets. When the course is completed the men take the final test aboard the shrimp boats.

There is no one man in the fishing industry that knows everything there is to be taught. Therefore, it was decided that each section would be instructed by the best available specialists, with one man as director and coordinator for the entire program. Carinhas was certified by the Texas Education Agency to direct the course of instruction, and was able to obtain the services of some of the most competent maintenance men to assist in the mechanical and electronic sections. Members of the industry volunteered to teach the section on fishing gear and net repairs. An experienced retired sea captain taught navigation. The Fish and Wildlife Service helped on biology and sanitation.

It was unknown what age groups or education levels the school would be dealing with so a minimum age of seventeen and an education level of the tenth grade was set, and the program was geared to those qualifications.

"We believe this program is basically suited for any segment of our industry, whether it be shrimp, lobster, tuna, or snapper," says Carinhas. With change of emphasis in various phases of instruction and inserting the fishing gear used locally, the program could be instituted in any section of our country."

On the day of registration, men ranging from seventeen to forty years of age applied for enrollment, with a total of fourteen registering. On the second night the enrollment reached a peak of twenty-one. Off and on enrollment dropped and rose until the program reached a point where new students could not be accepted because of class progress.

Commenting further on the school, Carinhas said, "The members of the committee . . . felt we had a good deal for young men. We were giving them a chance to prepare for an occupation which could raise their income considerably, but we did not go out and publicize the program enough. In the beginning it is necessary for the industry to get out and sell the program. It is necessary to use every form of communication to let the men know what we have to offer them. We must convince them that we have a life superior to what they could ordinarily expect. Also, we must explain that through hard work and serious planning, a man can eventually be owner of his own boat.

"By using this approach . . . we

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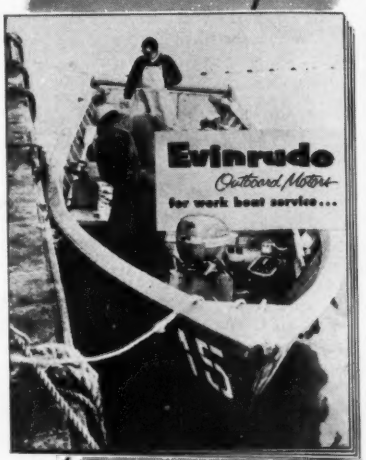

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can interest the youth of America in fisheries. We in the production section need young men with a higher education level than are currently present—men who can take proper care of our equipment, cut our cost of operation by using common sense in boat operation, and cut insurance costs by observing safety procedure and being less careless."

The question, why emphasize youth while there are men aboard our vessels now that could be trained, arises. ". . . Most of the men aboard our vessels are not interested in changing their methods of maintenance and operation. They feel they do not have the time to stop making money. . . . The youth of our country are strong in body and strong in mind. It is easier to teach them correctly from the beginning. They are of an ever-changing age, and their ideas in the future will be invaluable. It is up to us to interest these men in fisheries, supervise their training and to believe in what they have learned through our program.

"We need men who will strive to gain the utmost from their skills, and in return, give to us the utmost of their abilities."

Jack T. Styron, Louisiana Menhaden Co., New Orleans, La., served as chairman of the Industrial Products Division general session. A talk on "A New Trawl for Catching Herring and Other Fish on the Bottom and in Mid-water" was given at the session by W. E. Barraclough, Nanaimo Biological Station, Nanaimo, B.C. Stanley Letson, Maine Marine Products, Portland, Me., was elected the new Industrial Products Committee chairman.

Other speeches heard at the time were "Highlights of Fish Oil Research", "Availability of Animo Acids in Fish Meals and Other Protein Sources", "The Place of Essential Fatty Acids in Overall Nutrition".

The Shrimp Association of the Americas, an international trade association of which John C. Ferguson, Fort Myers, Florida, is president, held a directors' meeting in San Francisco at the same time the NFI was convening.

A new feature of the convention was the judging of fishery products by the ladies attending. Special score sheets were arranged and prizes were given to the women with highest judging score. There were also prizes for the men. Winners were Mrs. George D. Boukouris, New York City; Miss Neva L. Karrick, Seattle, Wash.; Fredrick M. Bundy, Gloucester, Mass.; and James F. Kindred, Astoria, Ore.

The convention was climaxed by the annual dinner dance and the presentation of annual awards. The Old Timers chose Myer Bornstein, Bornstein Sea Food Co., Bellingham, Wash., as Kingfish of 1958.

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Here's practical, money-saving advice: Go to your nearest supplier of *Barbour's* and *Gold Medal* Netting for your best buys in the new synthetic and cotton nettings and seine twines. They represent today's greatest developments in efficient, profit-making netting, are the products of America's first authority on commercial fish netting—the Linen Thread Company. You can count on their uniform strength and quality construction.

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EQUIPMENT and SUPPLY NEWS

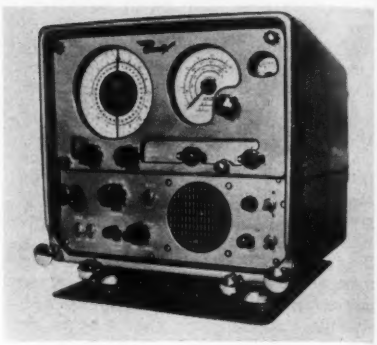
Bendix Automatic Visual Direction Finder

Bendix-Marine, 8211 Lankershim Blvd., North Hollywood, Cal., has a brand new Automatic Direction Finder with a cathode-ray tube presentation. The Bendix Visual ADF employs a non-rotating loop assembly permanently mounted to the boat. Signals collected by the loop are fed through a goniometer into a sensitive radio receiver whose output forms a bearing pattern on the picture tube. The rotating goniometer produces the same effect as though the loop were rotating.

The bearing pattern is indicated on the screen of the small cathode-ray tube in the form of a narrow propeller design in the same relative bearing as the transmitting station is to the ship. As soon as the station is tuned in, the pattern instantly appears on the screen at the correct bearing. With such simplified tuning, instantaneous bearings can be taken rapidly and accurately.

Sense is also indicated visually. It can be used to home in or track away from fixed stations. It can be used for rescue operations where the ship in distress is unable to give accurate bearings, or it can act as an electronic spotter.

The Bendix Visual ADF has an operating range in the beacon band from 200 to 600 kc; the broadcast band from 600 to 1700 kc; and the marine band 1.7 mc to 4 mc. The Bendix Visual ADF requires a 110 volt, 60 cycle AC power source, but can be obtained with Bendix Transistor Power Inverters for 12, 24, 32, and 110 volts DC operation. Power consumption is only 90 watts.



Bendix-Marine Automatic visual direction finder features non-rotating loop, instantaneous bearings, and picture tube presentation with simple operation.

New Onan Marine Diesel Electric Plant

A new series of Marine Diesel Electric Plants has been placed on the market by D. W. Onan & Sons Inc., Minneapolis, Minn. The Series 3MDSL will provide 3,000 watts of electric power for all types of craft. It is designed and built specifically for marine use and has built-in safety features for below deck installation.

Series 3MDSL electric plants are available in standard 60-cycle, AC voltages; in combination 115 volts, 60-cycle and 32 volts DC; and in both 32 volt and 110 volt DC battery chargers. Fifty-cycle models at 2,500 watts are also available.

The vertical, single cylinder, 4-cycle, water-cooled engine is a solid injection, full Diesel unit. An Onan-built, insulated generator is direct-connected to the engine, making a single, rigid set. Removable cylinders, to allow easier service and replacement; simplified plumbing, to insure a neater, more efficient and compact unit for easy installation; new control panel and mounted Power Take Off Pulley are a few of the features of the new MDSL series.

Ansul hand portable marine fire extinguishers showing the four-pound dry chemical extinguisher (right) and the 10-pound dry chemical extinguisher. The extinguishers are approved by Underwriter's Laboratories and the U. S. Coast Guard.

New Catalog Describes Superior Diesels

A twelve page catalog, Bulletin 112, covering performance data, features, and specifications of the Model 60 and Model 80 Superior marine Diesels has been issued by White Diesel Engine Division, Springfield, Ohio.

Included are two pages on the potential of heavy fuel operations and the performance curves of these vertical in-line models. Charts show over 25 percent more power for the same space requirements due to internal improvements and White's simplified supercharging system. Illustrations detail the engine styles and such construction refinements as the quick reversing feature, simple cylinder block design, open chamber combustion and dimension information are given.

Bludworth Philadelphia, Seattle Offices

Bludworth Marine, manufacturers of electronic navigation equipment, in line with its current expansion program, has established new sales offices in Philadelphia and Seattle.

The new sales and service center in Philadelphia is located at 1225 Vine Street, with W. J. Hutchins, sales manager, in charge. In Seattle, the new Bludworth Marine sales and service branch is at 2319 Second Avenue, with H. L. Plunkett, sales manager, in charge.

Bludworth Marine products include marine radar, depth sounders, direction finders and radio telephones.

Ansul Unveils Marine Fire Extinguishers

Ansul Chemical Co., Marinette, Wisc., is introducing two new types of marine dry chemical fire extinguishers, Robert A. Scheldt, manager of the recently organized Marine Department, has announced. The new extinguishers feature special salt water resistant undercoatings and Ansul marine name plates indicating Coast Guard approval. They are available in red, light blue, and white.

There are two types of extinguishers. The portable models have 4, 10, 20, and 30 pound dry chemical capacities, and are designed for smaller craft with accessible engine compartments. The semiportable fire extinguishing systems have capacities of 150 and 350 pounds. They are designed for the engine rooms of large boats.

All the equipment is approved by the U. S. Coast Guard. The semiportable systems are equipped with 50 feet of hose and Ansul's Dualstream nozzles, suitable for one man operation.

In addition to this equipment, Ansul's 30 pound dry chemical, automatic, piped system is now undergoing approval tests by the Coast Guard. The unit will be suitable for engine compartment and paint and oil storage locker protection. These small compact systems are listed by the Underwriters Laboratories.

Strong, Tough Tempaloy Shafting withstands severe jarring

When the pleasure boat "Ideclare" was returning from North Pacific and Canadian waters last Fall, one of its two 5-bladed propellers hit a submerged object. Inspection later at Jensen Motor Boat Co., Seattle, revealed that the propeller blades were badly bent . . . but the Tempaloy shafting remained true—unaffected by hours of pounding from the unbalanced propeller. Mr. Anchor Jensen states that this is the first time he has seen a new high-strength alloy propeller bent and the shafting remaining true.

"IDECLARE," twin-screw Chris-Craft cruiser which is in constant use in waters off Canada, getting overhauled after its underwater mishap. Power is transmitted to its 5-bladed wheels by two 1⅜" Tempaloy shafts.

TEMPALOY®-917, nickel-aluminum bronze shafting, was developed by The American Brass Company for use requiring extra high strength and lighter weight. Repowering with higher horsepower engines often means replacing original shafting, too. Tempaloy provides the needed extra strength with no increase in shaft diameter—saving costly alteration of bearing, stuffing box and housing assemblies. Features: toughness and high yield strength—high resistance to shock—excellent corrosion resistance—lighter weight—special straightening—close diameter tolerances—individually wrapped and trade-marked—reasonably priced.

TOBIN BRONZE® Shafting has proved itself through its dependable performance on thousands and thousands of pleasure boats, fishing and other commercial craft. It is this record of dependability that has made it first choice of boatbuilders and boatowners.

Both Anaconda propeller shafts are available through leading marine supply distributors. For detailed information, see your distributor or write: The American Brass Company, Ansonia Division, Ansonia, Conn. 58110

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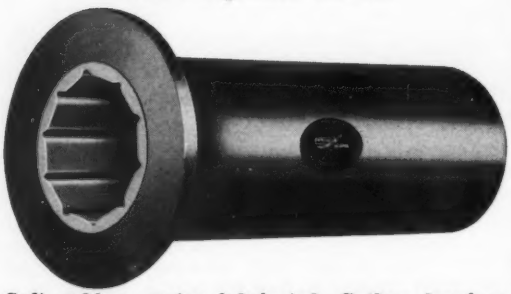

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FULL FORWARD to FULL REVERSE
. . . in just 3 Seconds!

Provides fingertip maneuverability for pleasure craft, fishing boats, harbor craft or work boats with engines up to 300 H.P. at 2200 RPM. Available with reduction gear ratios 1½:1; 2:1; 2½:1; 3:1; 3½:1; 4:1 and 4½:1. Also available as a direct drive reverse gear.

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Searchlights Wheel control

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Designers & Manufacturers of the World's Finest Marine Lighting Equipment

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IMMEDIATE SHIPMENT ON CARBONS, LAMPS & REPAIR PARTS

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Signalling Searchlights

Among the speakers at the three-day meeting of executives and sales staff of The Heminway & Bartlett Mfg. Co. of New York and Watertown, Conn., manufacturers of Nylock twine, were, left to right, W. S. Heminway, president, who told of the company's future expansion plans; C. Duane Houk, sales manager, who covered thread selling throughout the country; and W. E. Thompson, research director, who talked of new products and research development.

Thermostats In Evinrude Outboards

Evinrude Motors, Milwaukee, Wisc. has introduced temperature control to the outboard field in the new Evinrude four-cylinder 50 hp. motors and the 35 hp. Lark for 1958. The thermostatic control of engine temperatures has shown measurable fuel saving, longer spark plug life, and better lubrication, leading to better wear qualities, less condensation and improved fuel distribution. Carburetor adjustments brought on by changing weather conditions are eliminated.

Cooling of the outboard motor is accomplished by controlling the circulation of water through the engine. The thermostat regulates the cooling capacity. The recirculating system keeps the cooling system at a constant temperature throughout, discharging water only when it becomes heated to 150 degrees, and controls the intake of water at the pump so cold water does not enter the engine block directly. The cold water is first mixed with warmer water from the recirculating system.

A controlled test was conducted on a standard motor and a thermostat engine, operating under the same conditions at idling speeds of 600 rpm. for 400 hours, with intake temperatures controlled at 40 degrees. The Thermostat engine consumed 15 percent less fuel, used only three spark plugs against 14 for the standard engine. It showed better lubrication of parts, no condensation in the crankcase, fewer varnish deposits on piston walls and evidence of better fuel distribution. Sludge deposits did not accumulate in the thermostat engine.

Columbian Propellers for Large Outboards

Columbian Bronze Corp., Freeport, N. Y., is manufacturing eleven types of 2, 3, and 4 blade "Customized" propellers for the 50 hp., V-4 motors of Johnson and Evinrude. Available in aluminum alloy or bronze, they are specifically designed to cover all service applications arising from the varying combinations of hull, hp., and load.

In addition, a series of seven "Customized" propeller types in aluminum alloy or bronze for the new 60 hp. Scott Atwater outboard engines is now in production.

New Chrysler Dealers in Florida

Chrysler Marine and Industrial Engine Division has announced the appointment of two Chrysler Marine Engine dealers in the Florida area. The new dealers are Sirco, Incorporated, P. O. Box 468, Key West, Fla. and Ft. Pierce Marine Park Corp., No. 1 Avenue A, Ft. Pierce, Fla.

Sirco, Inc. will cover the city of Key West, county of Monroe. E. A. Reynolds is president and general manager. W. J. Ipock is the secretary-treasurer and R. C. Slater is the sales manager.

J. E. Tierney, Sr. is president of Ft. Pierce Marine Park Corp., and William Zeller is service and parts manager. J. E. Tierney, Jr. is vice president and sales manager.

BOAT CATCHES

For Month of April

Hailing fares. Figure after name indicates number of trips.

BOSTON (Mass.)

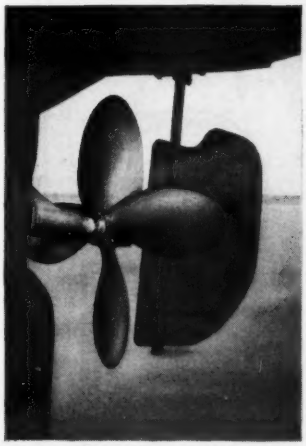
Agatha (3)	169,500	Michael G. (3)	33,400
Agatha & Patricia (1)	101,400	Michigan (2)	346,600
Annie & Lucy (1)	15,700	Minnie (2)	323,200
Arlington (3)	507,100	Mother Frances (4)	231,300
Atlantic (2)	83,500		
		Nautilus (1)	64,000
Baby Rose (2)	157,600	New Star (2)	260,500
Bay (3)	326,200	Notre Dame (2)	83,800
Blue Waters (3)	167,500		
Bonaventure (1)	120,600	Ocean Wave (1)	43,400
Bonnie (1)	165,500	Ohio (2)	299,500
Bonnie Billow (2)	231,500	Olympia LaRosa (4)	138,500
Brighton (2)	185,500		
Buzz & Billy (4)	136,100	Pam Ann (2)	232,000
		Patty Jean (2)	361,500
Cambridge (2)	368,000	Pauline H. (1)	97,000
Caracara (3)	186,000	Phantom (2)	353,000
Carmela Maria (2)	28,500	Phillip & Grace (1)	99,400
Carmen & Vince (3)	135,700	Pilgrim (1)	84,500
Catherine B. (2)	10,600	Plymouth (2)	222,400
Charlotte M. (4)	225,300	Puritan (1)	101,800
Comet (2)	237,900		
		Racer (3)	473,400
Eagle (1)	114,600	Raymonde (2)	134,500
Elizabeth B. (2)	170,800	Red Jacket (3)	621,800
Emily Brown (2)	159,800	Regina Maria (2)	183,900
Estrela (1)	111,000	Rosa B. (3)	468,500
Ethelena (3)	121,600	Rosie (5)	52,500
		Rush (2)	244,000
Flying Cloud (3)	766,000		
Four (2)	246,500	St. Angelo (3)	165,600
		St. Victoria (1)	53,600
Geraldine & Phyllis (4)	108,900	San Calogero (1)	22,400
		Santa Maria (1)	31,300
Hazel B. (2)	156,600	Santa Rita II (3)	35,300
Holy Family (1)	102,000	Stanley B. Butler (1)	102,000
		Star of the Sea (1)	46,100
Jane B. (2)	176,500	Sunlight (2)	178,800
J. B. Junior (2)	244,700	Swallow (2)	236,500
Jeanne D'Arc (3)	132,700		
Joseph & Lucia (2)	209,900	Terra Nova (2)	286,500
Josephine P. II (3)	85,000	Texas (2)	223,000
		Thomas D. (3)	150,800
Katie D. (2)	166,700	Thomas Whalen (2)	188,000
		Villanova (2)	84,600
Lady of the Rosary (2)	79,900	Vincie N. (1)	22,600
Leonard & Nancy (2)	94,300		
		Weymouth (3)	374,800
Magellan (3)	103,000	Wild Duck (2)	202,800
Manuel F. Roderick (2)	205,900	Wm. J. O'Brien (2)	277,700
Mary & Joan (2)	195,300	Winchester (3)	514,700
Mary Rose (3)	193,000	Wisconsin (2)	353,500
M. C. Ballard (2)	175,300		

NEW BEDFORD (Mass.)

Adventurer (3)	42,600	Kelbarsam (4)	28,200
Althea (2)	26,600		
Anastasia E. (1)	4,900	Lorine III (3)	44,000
Annie M. Jackson (3)	24,700	Luann (2)	19,500
		Lubenray (3)	43,800
Barbara M. (3)	33,300		
		Major J. Casey (2)	56,000
Cap'n Bill II (3)	54,000	Malvina B. (1)	14,000
Captain Deebold (2)	35,500	Marie & Katherine (2)	34,900
Carl Henry (2)	61,900	Mary E. D'Eon (2)	24,000
Catherine & Mary (3)	66,500	Mary Tapper (3)	65,300
Catherine B. (1)	19,500	Midway (3)	117,000
Charles E. Beckman (4)	52,000	Miriam A. (3)	33,500
Christina J. (3)	54,200	Molly & Jane (4)	67,400
Christine & Dan (3)	41,500		
Comber (3)	20,800	Nautilus (1)	38,000
Connie F. (1)	15,500	North Sea (2)	33,600
Debbie & Jo-Ann (2)	21,800	Olive Williams (2)	32,500
Eugene H. (1)	9,000	Pauline H. (3)	274,300
Eunice-Lillian (2)	54,000	Phyllis J. (3)	29,900
Falcon (3)	47,900	Roberta Anne (2)	32,700
Famiglia (1)	14,500	Rosemarie V. (2)	55,800
Friendship (3)	42,100	Rush (5)	117,000
		R. W. Griffin, Jr. (3)	85,700
Gannet (3)	166,100		
Growler (3)	58,000	Shannon (2)	31,500
		Solveig J. (3)	200,800
Harmony (3)	48,100	Stanley B. Butler (2)	99,600
Hope II (4)	66,100	Sunbeam (3)	52,700
		Susie O. Carver (2)	26,500
Invader (2)	62,500		
Isabelle J. II (1)	7,500	Theresa & Jean (3)	171,700
Ivanhoe (3)	40,800	Two Brothers (1)	11,500
Jacintha (2)	125,000	Venture I (3)	109,400
Janet & Jean (2)	27,000	Victor Johnson (3)	40,000
Julia DaCruz (3)	55,500	Viking (2)	58,500
Katie D. (2)	72,800	Whaler (3)	110,800

AGAIN!

DIESEL ENGINE SALES, INC. CHOSE A COLUMBIAN PROPELLER FOR THEIR 700th TRAWLER



50 x 34 Columbian propeller on the "Caribbean Sea," 67 ft. shrimp trawler built for Sahlman Seafood of Tampa, Fla.

THE TOUGHEST, STRONGEST, LONGEST LASTING PROPELLERS IN THE WORLD ARE COLUMBIANS

Perfectly balanced and precision-built of **ELECTRALLOY**, the finest propeller metal in the world — specially developed by Columbian for superlative **STRENGTH**, top **RESISTANCE** against corrosion, and high **REPARABILITY.**

You can profit by having a Columbian wheel at the "business end" of your boat! Write for information to Columbian Bronze Corp.

COLUMBIAN BRONZE CORP.

FREEPORT, L. I. NEW YORK

A New Service by HASKELL & HALL, Inc.

Offered to Boat Owners and Builders

Send us the Size, Pitch, Hand, Bore and Type of the Propeller you want. If it is a Used Wheel you want, we will try and locate it for you, either from our Large Stock on Hand or from Customers' Listings with us. If it is a New Wheel, we have Your Columbian Size in Stock Now. Whether you need a spare wheel or a wheel for every day use, you will find us most happy to help you.

Propeller Owners: List Your Surplus Wheels with us and let us sell them for you.

Warehouse Distributors for Columbian Bronze Propellers

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36 Webb St. Salem, Mass. Tel. Pioneer 4-3806

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PROTECT THE LIFE OF YOUR ENGINES

CLOSED COOLING • CLAMP ON MODEL •
NO CORROSION, RUST, SAND, DIRT.
SIZES FOR ALL ENGINES — BOATS

Makers of:
Reduction Gears Transfer Drives
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Accurate • Reliable • Sea Going
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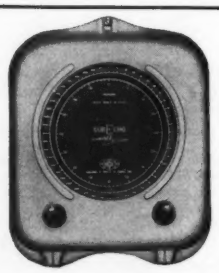

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LOW-COST RADAR TYPE 14
KELVIN HUGHES
Lighter weight, easier installation. New style antenna scanner. 60kw peak power transmitter. 5 scale ranges: ½ to 3, 6, 12, 24, and 48 miles. Sharp definition on easily read 9" screen.

NEW ASDIC FISH FINDER
HORIZONTAL — VERTICAL
Powerful combined Echo Ranging (horizontally at 5° tilt, 0 to 2000 yards, 170° on either side) and Echo Sounding (vertically 0 to 120 fathoms). Recorder indicates target range. For 24v or 110v DC. Automatic or manual scanning.

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BLUDWORTH MARINE
Division of KEARFOTT COMPANY, INC.
1500 Main Avenue, Clifton, N. J.

New Bedford Scallop Landings (Lbs.)

Abram H. (2)	22,000	Kingfisher (2)	17,500
Adele K. (2)	21,000		
Agda W. (1)	7,000	Laura A. (2)	22,000
Aloha (2)	22,000	Lauren Fay (2)	22,000
Alpar (2)	20,100	Linda & Warren (3)	15,300
Amelia (2)	20,500	Linus S. Eldridge (2)	22,000
		Louise (2)	20,500
Babe Sears (2)	22,000		
Baltic (2)	19,500	Malene & Marie (2)	22,000
B. Estelle Burke (2)	21,000	Marmax (1)	9,000
Bobby & Harvey (2)	18,700	Mary Ann (3)	33,000
Brant (2)	22,000	Mary J. Hayes (2)	19,000
Bright Star (3)	32,000	Mary J. Landry (1)	11,000
Brother Joe (2)	7,200	Moonlight (3)	31,500
Cap'n Bill (1)	9,000	Nancy Jane (2)	19,000
Carol & Estelle (1)	10,500	Nellie Pet (1)	7,500
Catherine C. (2)	21,000	New Bedford (3)	33,000
Charles S. Ashley (3)	33,000	Newfoundland (2)	22,000
Clipper (2)	19,000	Noreen (2)	22,000
Dartmouth (2)	22,000	Pearl Harbor (2)	18,800
		Pelican (2)	22,000
Edgartown (3)	33,000	Polaris (2)	19,000
Eleanor & Elsie (2)	22,000	Porpoise (2)	18,000
Elizabeth N. (2)	17,000		
Empress (2)	12,600	Ruth Lea (2)	21,000
Eugene H. (1)	11,000	Ruth Moses (2)	18,500
Fairhaven (2)	22,000	Sea Ranger (1)	10,200
Flamingo (2)	21,500	Sharon Louise (2)	20,000
Fleetwing (2)	22,000	Sippican (3)	33,000
Florence B. (2)	22,000	Snoopy (2)	22,000
		Stanley H. Fisher (2)	7,500
Geraldine (2)	22,000	Stephen R. (2)	15,500
Hilda Garston (2)	19,000	Ursula M. Norton (3)	33,000
Jerry & Jimmy (2)	17,500	Vivian Fay (2)	19,300
John G. Murley (2)	22,000		
Josephine & Mary (2)	19,000	Whaling City (2)	21,800

GLOUCESTER (Mass.)

Acme (8)	60,500	Linda B. (7)	24,500
Agatha (1)	20,000	Little Flower (7)	56,500
Agatha & Patricia (1)	40,000	Little Joe (1)	4,500
American Eagle (4)	46,500		
Anna Guarino (6)	9,500	Margaret Marie (4)	13,000
Annie (4)	9,500	Marianna II (5)	89,000
Anthony & Josephine (10)	29,000	Mary Ann (5)	122,500
Ave Maria (2)	7,500	M. C. Ballard (1)	11,000
		Michael G. (1)	4,000
Bonaventure (3)	103,000	Morning Star (6)	56,500
Bonnie Bill (7)	37,000		
		Nancy & Maria (8)	27,000
Cape Cod (7)	26,000	Natale III (7)	129,500
Carlannsul (5)	8,500	Njorth (2)	5,000
Carlo & Vince (2)	6,000	No More (6)	8,000
Carmela Maria (1)	5,000		
Cigar Joe (6)	109,000	Olympia (6)	192,000
Curlew (2)	315,000	Our Lady of Fatima (2)	420,000
Cushmeer (2)	480,000		
		Peggy Belle (3)	3,000
Dawn (6)	7,000	Pilgrim (1)	100,000
Dolphin (3)	252,000	Pioneer (12)	17,000
Doris F. Amero (2)	105,500	Prosperity (14)	21,000
		Puritan (3)	210,000
Eagle (1)	130,000		
Eddie & Lulu M. (11)	21,500	Raymonde (1)	100,000
Eva II (10)	25,000	Regina Maria (1)	60,000
Evelyn C. Brown (1)	285,000	Rose & Lucy (4)	59,000
		Rosie & Gracie (7)	51,500
Falcon (14)	37,500		
Flow (1)	290,000	St. Anna Maria (6)	104,000
Frances R. (5)	48,000	St. Cabrini (7)	84,000
Frankie & Jeanne (6)	6,500	St. John (10)	14,500
		St. Joseph (3)	90,500
Gaetano S. (2)	146,000	St. Mary (9)	132,000
Gertrude E. (6)	6,000	St. Nicholas (1)	111,700
Giacoma (12)	14,000	St. Peter (6)	131,000
Golden Dawn (2)	5,000	St. Peter III (3)	77,000
Gulf Stream (1)	210,000	St. Providenza (7)	13,000
		St. Rosalie (6)	165,500
Holy Family (1)	14,000	St. Stephen (6)	14,500
Holy Name (7)	59,000	St. Terese (4)	55,000
		St. Victoria (2)	134,000
Ida & Joseph (6)	163,000	Salvatore & Grace (6)	82,000
Immaculate Conception (4)	43,000	Sebastiana C. (7)	179,000
Irma Virginia (1)	6,500	Serafina N. (7)	69,000
		Serafina II (6)	104,500
Jackie B. (5)	148,500	Sunlight (1)	70,000
Jackson & Arthur (9)	13,000		
J.B.N. (3)	84,000	Theresa M. Boudreau (2)	440,000
Josephine P. II (2)	5,000	Topsy Parson (5)	10,000
Joseph S. Mattos (2)	400,000	Victoria (3)	3,000
Josie II (6)	9,500	Villanova (1)	225,000
Judith Lee Rose (2)	570,000	Vincie N. (1)	55,000
		Virginia Ann (6)	32,500
Kingfisher (2)	450,000		
Kurta (4)	3,000	White Owl (5)	9,000
		Wild Duck (1)	150,000
Lady or the Rosary (3)	125,000	Winthrop (1)	160,000

Scallop Landings (Lbs.)

Pocahontas (1)	11,000

WOODS HOLE (Mass.)

Angelina (2)	1,900	Jennie M. (1)	1,900
Arnold (6)	31,300	Lillian C. (1)	2,300
Bernice (5)	17,000	Lynn (3)	19,100
Cap'n Bill II (1)	1,300	Madeline (5)	15,700
Carl Henry (1)	4,300	Madonna De Seracusa (1)	500
Carole Ann (3)	28,900	Margie L. (3)	16,200
Christine & Dan (1)	4,200	Mary F. (2)	1,900
Clara C. (1)	900	Morning Star (8)	10,800
Curlew (4)	13,500	Papoose (2)	2,400
Dorothy & Mary (1)	900	Reliance (2)	2,900
Driftwood (3)	5,900	Roann (1)	10,000
Gertrude D. (3)	25,100	Ruth M. (1)	700
Gertrude E. (1)	5,000	Southern Cross (4)	10,000
Gull (1)	600	Theresa (1)	900
Harvest (4)	5,100	Three Bells (4)	8,600
Isabelle J. (1)	400	Viking (3)	6,000
Isabelle J. II (3)	6,700	Winifred M. (2)	4,500
Janet & Elise (1)	900		

Scallop Landings (Lbs.)

Camden (1)	11,000	Louis A. Thebaud (1)	2,700
Hilda Garston (1)	10,000		

ROCKLAND (Me.)

Araho (4)	303,000	Mabel Susan (4)	145,500
Elin B. (3)	145,000	Ocean (2)	510,000
Flo (4)	179,000	Rhode Island (4)	149,000
Flow (1)	81,500	Squall (2)	585,000
Helen Mae II (3)	134,500	Storm (2)	600,000
John J. Nagle (3)	265,000	Surf (2)	525,000
Little Growler (4)	245,000	Tide (1)	130,000
Louise G. (4)	121,000	Wave (2)	580,000

Scallop Landings (Lbs.)

Pocahontas (1)	11,000

PORTLAND (Me.)

Alice M. Doughty II (6)	176,800	Mary & Helen (5)	10,700
Andarte (4)	323,000	Mary & Jennie (7)	48,600
Ariel (2)	4,700	Medan (1)	260,000
Bois Bubert (1)	2,200	Nancy B. (3)	72,500
Challenger (5)	8,200	Quincy (1)	190,000
Courier (2)	260,000	St. George (2)	370,000
Crescent (3)	5,200	St. Joseph II (6)	29,700
Dorchester (3)	148,000	Theresa R. (3)	290,000
Dorothy & Ethel II (4)	60,100	Vandal (5)	229,000
Elinor & Jean (2)	55,800	Verna G. (1)	2,800
Gulf Stream (3)	227,000	Vida E. II (9)	27,200
Lawrence Scola (5)	51,400	Wawenock (1)	250,000
Marie H. (1)	2,500	Winthrop (1)	180,000

STONINGTON (Conn.)

America (1)	500	Jane Dore (8)	6,700
Averio (7)	3,800	Lt. Thos. Minor (4)	5,600
Bette Ann (9)	4,400	Marise (11)	7,200
Carl J. (11)	22,300	Old Mystic (12)	8,400
Carolyn & Gary (12)	10,500	Our Gang (1)	1,100
Connie M. (6)	4,000	Theresa (1)	2,000
Dauntless (1)	1,000	William B. (8)	9,400
Fairweather (2)	4,400		

NEW YORK

Andrea G. (5)	371,100	Felicia (4)	242,500
Austin W. (4)	207,100	Golden Eagle (2)	133,000
Carol-Jack (3)	187,800	Lady of Good Voyage (2)	109,000
Clipper (2)	162,000	Richard Lance (1)	6,000
Edith L. Boudreau (2)	135,800	Tina B. (3)	200,000
Evelina M. Goulart (2)	167,400		

Scallop Landings (Lbs.)

Barbara & Gail (2)	22,000	Muskegon (2)	18,000
Beatrice & Ida (3)	30,700	Norseman (2)	22,300
David A. (3)	31,400	Richard Lance (1)	11,000
Enterprise (3)	33,000	Smilyn (1)	9,000
Louis A. Thebaud (1)	3,500		

SEATTLE (Halibut Fleet Fishery)

Arlice (1)	23,000	Seafarer (1)	85,000
Blue Pacific (1)	66,000	Sea Ranger (1)	60,000
Brooks Bay (1)	85,000	Seattle (1)	88,000
Chelsea (1)	40,000	Seymour (1)	48,000
Martindale (1)	16,000	Thor (1)	44,000
Pacific (1)	63,000	Western Girl (1)	85,000

NEW SURPLUS

MARINE EQUIPMENT

PUMPS

MOTOR DRIVEN CENTRIFUGAL PUMPS, 150 GPM, 35' head, 3" suction, 2½" discharge. Motor: 2 HP 8 amp 230 VDC, mfg. by Master Electric Co. $185.00 ea. FOB

FRESH WATER PUMP for BUDA diesel engine model 1879. $125.00 ea. FOB

PORTABLE SUBMERSIBLE BILGE PUMPS—115 VDC—140 GPM @ 70' head. 4½ HP motor, with automatic switch, foot valves & waterproof controls, suction strainers, 50' of submersible electric cable. 2½" fire hose threads; all-bronze casing. $175.00 ea. FOB

BILGE PUMPS—¼ HP—120 VDC—2.4 amps—Ingersoll-Rand type IRVNS¼—13' head @ 35 GPM—1½" inlet—1" outlet—totally enclosed GE motor. Close-coupled motor driven. $122.75 ea. FOB

DIESEL ENGINES

FAIRBANKS-MORSE 37F10—10 X 12½—6 cyl.—240 HP @ 400 RPM. Built approx. 1945. $3950. FOB

AIR COMPRESSORS

HIGH PRESSURE DIESEL STARTING AIR COMPRESSORS—mfg. by Worthington—600 lbs. @ 11.4 CFM with 7.5 115 VDC motor, pressure switch, selector switch, spare parts, motor starter. Liquid cooled. $975.00 ea. FOB

QUINCY MODEL D-320 COMPRESSOR—4 X 2½ X 3—with loadless starting. 2-stage; 15 CFM @ 100 lbs.—3 HP 115 or 230 VDC.

MISCELLANEOUS

AIR TANKS—high pressure diesel starting—600 lbs. $89.50 ea. FOB

MANIFOLDS—2-valve—4" and 3"—$37.50 ea. FOB

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Diesel Engine Sales of Ft. Myers, Fla., Inc., 2909 Frierson, Ft. Myers, Fla.
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General Marine Boatyard, Inc., Fort Myers Beach, Fla.
Gladding-Hearn Shipbuilding Corp., 1 Riverside Ave., Somerset, Mass.
Morehead City Shipbuilding Corp., Morehead City, N. C.

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Stroudsburg Engine Works, 62 North 3rd St., Stroudsburg, Penn.

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Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp., Palmer, Mass.

FOREIGN BAILINGS

HEADLINE ROPE developed by Nanaimo Biological Station, British Columbia, is constructed of preformed alternate lay galvanized wire rope, sheathed with braided spun Nylon rope. It has proved successful in midwater trawls and ocean perch nets. The braided Nylon sheathing was chosen to eliminate slippage of knots in hanging netting to the headline. Sheathing is marked with a continuous red line to assist in preventing twists and turns being placed in the rope when hanging the netting. The rope can be easily spliced by paring away the Nylon sheathing and covering the area with a synthetic tape.

OCEAN INVESTIGATIONS indicate that failure of the recent herring fisheries in Norway was due to the incursion of cold surface water from the Baltic Sea, according to a Norwegian fisheries consultant.

There were enough herring off the Norwegian coast to have landed twice as much as in a normal year. However, the Baltic water drove the herring to greater depths than usual, and when caught and pulled up through the frigid surface, they went wild and burst the nets.

RUSSIAN FISHING ACTIVITY in the Northwest Atlantic is increasing. According to a broadcast by Radio Moscow, large trawlers from Murmansk now fish as far west in the Atlantic as Greenland and Newfoundland waters.

Further, the U. S. S. R. Polar Institute in recent years has tried to find new fishing grounds in the West Atlantic. On the eastern part of the Grand Banks of Newfoundland, new ocean perch fishing grounds were discovered.

PANAMA EXPANSION which started in mid-1956 and swelled capital investment in the country's shrimp industry to an estimated $6,205,000 by June 1957 appears to have come to a stop. Plans for further expansion have been deferred until the industry can be reappraised.

Disappointing returns of new independent boat owners has caused new risk capital to withdraw from the industry. Panamanian boat builders report many cancellations and in some instances stop orders on boats under construction.

ISSUANCE OF PERMITS for the taking of whales, tuna, and live bait by foreign fishing vessels is provided in a new Columbia, South America decree.

If the fees are reasonable, another area for United States tuna boats will be opened.

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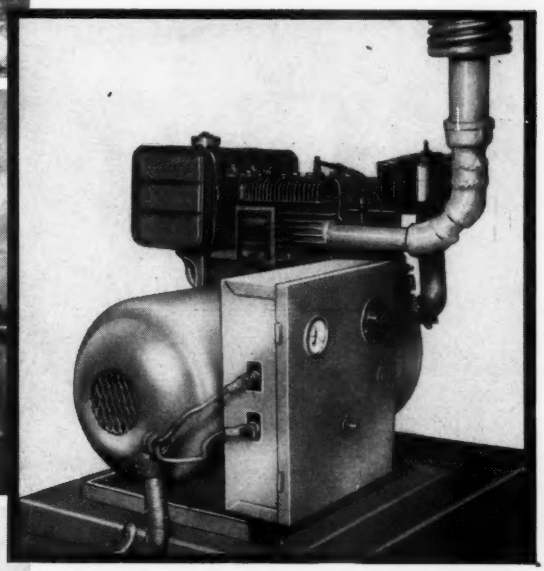

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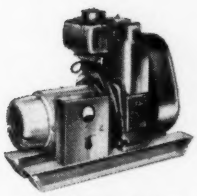
The photograph to the left shows an actual WINPOWER installation on the Jeanette, one of the latest shrimp trawlers built by Congeladora del Pacifico, Mazatlan, Mexico. Like hundreds of other commercial craft, the Jeanette depends on a WINPOWER Electric Plant for dependable, low-cost power and light afloat.



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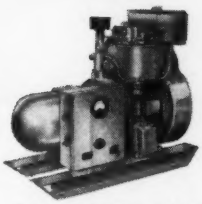

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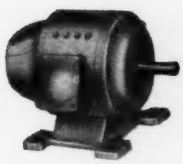

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